Inventor Search

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FILE COVERS 1907 - 15 Jan 2005 VOL 142 ISS 4
FILE LAST UPDATED: 14 Jan 2005 (20050114/ED)

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L31 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:633479 HCAPLUS
DN 141:162388
ED Entered STN: 06 Aug 2004
TI Modified polysaccharides combination with anti-cancer drugs for enhanced treatment of cancer
IN **Platt, David**
PA **Pro-Pharmaceuticals Inc, USA**
SO PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004064777	A2	20040805	WO 2004-US747	20040114

W: AE, AE, AG, AL, AL, AM, AM, AM, AT, AT, AU, AZ, AZ, BA, BB, BG, BG, BR, BR, BW, BY, BY, BZ, BZ, CA, CH, CN, CN, CO, CO, CR, CR, CU, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EC, EE, EE, EG, ES, ES, FI, FI, GB, GD, GE, GE, GH, GM, HR, HR, HU, HU, ID, IL, IN, IS, JP, JP, KE, KE, KG, KG, KP, KP, KP, KR, KR, KZ, KZ, KZ, LC, LK, LR, LS, LS, LT, LU, LV, MA, MD, MD, MG, MK, MN, MW, MX, MX, MZ, MZ, NA, NI

PRAI US 2003-440496P P 20030116

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004064777	ICM	A61K

AB Modified polysaccharide compns. and their use in combination with an anticancer drug for treating subjects with cancer, reduce toxicity and inhibit metastasis, are described. The modified polysaccharide includes a saccharide backbone being <5% esterified and containing repeating units, wherein each repeating unit has a plurality of uronic acid mols., each repeating unit having at least one neutral monosaccharide attached thereto, at least one side chain of saccharides attached to the backbone further comprising a plurality of neutral saccharides or saccharide derivs.; and having an average mol. weight in the range of 15 to 60 kD. The polysaccharide when combined with the chemotherapeutic drug behaves as a delivery vehicle, which pos. enhance the chemotherapeutic effect while reducing side effects.

ST polysaccharide anticancer drug

IT Sarcoma
(Kaposi's; modified polysaccharides combination with anticancer drugs for enhanced treatment of cancer)

IT Mammary gland, neoplasm
(adenocarcinoma; modified polysaccharides combination with anticancer drugs for enhanced treatment of cancer)

IT Ovary, neoplasm
(carcinoma; modified polysaccharides combination with anticancer drugs for enhanced treatment of cancer)

IT Leukemia
(chronic; modified polysaccharides combination with anticancer drugs for enhanced treatment of cancer)

IT Intestine, neoplasm
(colon; modified polysaccharides combination with anticancer drugs for enhanced treatment of cancer)

IT Intestine, neoplasm
(colorectal; modified polysaccharides combination with anticancer drugs for enhanced treatment of cancer)

IT Drug delivery systems
(injections, i.m.; modified polysaccharides combination with anticancer drugs for enhanced treatment of cancer)

IT Drug delivery systems
(injections, i.v.; modified polysaccharides combination with anticancer drugs for enhanced treatment of cancer)

IT Drug delivery systems
(injections, s.c.; modified polysaccharides combination with anticancer drugs for enhanced treatment of cancer)

IT Antitumor agents
Bladder, neoplasm
Digestive tract, neoplasm
Kidney, neoplasm
Lung, neoplasm

Mammary gland, neoplasm
Melanoma
Molecular weight distribution
Neoplasm
Pharynx, neoplasm
Prostate gland, neoplasm
Stomach, neoplasm
(modified polysaccharides combination with anticancer drugs for enhanced treatment of cancer)

IT Monosaccharides
Oligosaccharides, biological studies
Polysaccharides, biological studies
Uronic acids
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(modified polysaccharides combination with anticancer drugs for enhanced treatment of cancer)

IT Mast cell
(neoplasm, mastocytoma; modified polysaccharides combination with anticancer drugs for enhanced treatment of cancer)

IT Drug delivery systems
(oral; modified polysaccharides combination with anticancer drugs for enhanced treatment of cancer)

IT Pharynx, neoplasm
(squamous cell carcinoma; modified polysaccharides combination with anticancer drugs for enhanced treatment of cancer)

IT Drug interactions
(synergistic; modified polysaccharides combination with anticancer drugs for enhanced treatment of cancer)

IT Drug delivery systems
(topical; modified polysaccharides combination with anticancer drugs for enhanced treatment of cancer)

IT Interferons
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(α; modified polysaccharides combination with anticancer drugs for enhanced treatment of cancer)

IT 50-02-2, Dexamethasone 50-18-0, Cyclophosphamide 50-44-2, Mercaptopurine 50-76-0, Dactinomycin 51-21-8, Fluorouracil 51-75-2, Mechlorethamine 52-24-4, Thiotepa 53-19-0, Mitotane 55-98-1, Busulfan 56-53-1, Diethylstilbestrol 57-22-7, Vincristine 58-05-9, Leucovorin 58-22-0, Testosterone 59-05-2, Methotrexate 76-43-7, Fluoxymesterone 125-84-8, Aminoglutethimide 127-07-1, Hydroxyurea 127-31-1, Fludrocortisone 147-94-4, Cytarabine 148-82-3, Melphalan 154-42-7, Thioguanine 154-93-8, Carmustine 302-79-4, Tretinoin 305-03-3, Chlorambucil 520-85-4, Medroxyprogesterone 671-16-9, Procarbazine 685-73-4, Galacturonic acid 865-21-4, Vinblastine 1404-00-8, Mitomycin 1605-68-1, Taxane 2098-66-0, Cyproterone 2998-57-4, Estramustine 3562-63-8, Megestrol 3677-24-5 3677-26-7 3677-27-8 3778-73-2, Ifosfamide 4291-63-8, Cladribine 4342-03-4, Dacarbazine 9015-68-3, Asparaginase 10540-29-1, Tamoxifen 10596-23-3 11056-06-7, Bleomycin 13010-47-4, Lomustine 13311-84-7, Flutamide 14769-73-4, Levamisole 15663-27-1, Cisplatin 18378-89-7, Plicamycin 18883-66-4, Streptozocin 19767-45-4, Mesna 20830-81-3, Daunomycin 21679-14-1, Fludarabine 23214-92-8, Doxorubicin 27548-93-2, Baccatin III 29767-20-2, Teniposide 30244-35-0, Baccatin I 31077-81-3, 7-EpiBaccatin III 33069-62-4, Taxol 33419-42-0, Etoposide 40391-99-9 41575-94-4, Carboplatin 51264-14-3, Amsacrine 53643-48-4, Vindesine 53714-56-0, Leuprolide 53910-25-1, Pentostatin 56420-45-2, Epirubicin 57672-77-2, Baccatin IV 57672-79-4, Baccatin VI 57672-80-7, Baccatin VII 57982-77-1, Buserelin 58957-92-9, Idarubicin 61825-94-3, Oxaliplatin 63612-50-0, Nilutamide 65271-80-9, Mitoxantrone 65807-02-5, Goserelin 66107-60-6, Baccatin 66107-61-7, Baccatin diacetate 68335-15-9, Porfimer 71486-22-1, Vinorelbine 71610-00-9, Taxol B 76429-85-1, 10-Deacetyl cephalomannine 76446-91-8

78479-12-6 83150-76-9, Octreotide 85622-93-1, Temozolomide
90352-19-5, Cephalomannine 7-xyloside 90357-06-5, Bicalutamide
95058-81-4, Gemcitabine 95603-44-4 97682-44-5, Irinotecan
102417-98-1, Metamycin 107868-30-4, Exemestane 112809-51-5, Letrozole
112887-68-0, Raltitrexed 114977-28-5, Taxotere 115437-21-3,
7-(Triethylsilyl)baccatin III 120511-73-1, Anastrozole 121181-53-1,
Filgrastim 123948-87-8, Topotecan 126585-68-0, Spicatin 132278-43-4,
O-Acetylbaccatin IV 133524-70-6, N-Debenzoyltaxol A 149399-66-6,
7-(4-Azidobenzoyl)baccatin III 152459-95-5, Imatinib 154361-50-9,
Capecitabine 155416-23-2, 13-(2',3'-Dihydroxy-3'-
phenylpropionyl)baccatin III 174722-31-7, Rituximab 176669-82-2,
Baccatin A 180288-69-1, Trastuzumab
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(modified polysaccharides combination with anticancer drugs for
enhanced treatment of cancer)

L31 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:595506 HCAPLUS
DN 137:125358
ED Entered STN: 09 Aug 2002
TI Preparation of modified uronic acid-containing polysaccharides for
treatment of cancer
IN **Platt, David**
PA USA
SO U.S. Pat. Appl. Publ., 14 pp., Cont.-in-part of U. S. Ser. No. 24,487.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K031-715
ICS C08B037-00
NCL 514054000
CC 33-8 (**Carbohydrates**)
Section cross-reference(s): 1, 63

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2002107222	A1	20020808	US 2002-41350	20020108 <--
PRAI US 1993-24487	A2	19930301 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2002107222	ICM	A61K031-715
	ICS	C08B037-00
	NCL	514054000
US 2002107222	ECLA	C08B037/00 <--

AB Modified polysaccharide compns. and their use for treating subjects with cancer, preventing cancer in high-risk subjects and inhibiting metastasis in a subject (no data), are described. The modified polysaccharide includes a saccharide backbone being less than 5% esterified and containing repeating units, wherein each repeating unit has a plurality of uronic acid mols., each repeating unit having at least one neutral monosaccharide attached thereto, at least one side chain of saccharides attached to the backbone further comprising a plurality of neutral saccharides or saccharide derivs.; and having an average mol. weight in the range of 15 to 60 kD.
ST uronic acid polysaccharide prepn antitumor cell adhesion cancer treatment
IT Sarcoma
(Kaposi's; preparation of modified uronic acid-containing polysaccharides
for
treatment of cancer)
IT Mammary gland, neoplasm
(adenocarcinoma; preparation of modified uronic acid-containing
polysaccharides

for treatment of cancer)
IT Fetuins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(asialofetuins; preparation of modified uronic acid-containing polysaccharides
for treatment of cancer)
IT Sialoglycoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(asialoglycoproteins; preparation of modified uronic acid-containing polysaccharides for treatment of cancer)
IT Ovary, neoplasm
(carcinoma; preparation of modified uronic acid-containing polysaccharides for
treatment of cancer)
IT Leukemia
(chronic; preparation of modified uronic acid-containing polysaccharides for treatment of cancer)
IT Intestine
Intestine, neoplasm
(colon; preparation of modified uronic acid-containing polysaccharides for treatment of cancer)
IT Intestine, neoplasm
(colorectal; preparation of modified uronic acid-containing polysaccharides for
treatment of cancer)
IT Agglutinins and Lectins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(galectin-3; preparation of modified uronic acid-containing polysaccharides for
treatment of cancer)
IT Leukemia
Sarcoma
(inhibitors; preparation of modified uronic acid-containing polysaccharides for
treatment of cancer)
IT Neoplasm
(metastasis; preparation of modified uronic acid-containing polysaccharides for
treatment of cancer)
IT Adhesion, biological
Antitumor agents
Bladder, neoplasm
Kidney, neoplasm
Lung
Lung, neoplasm
Mammary gland, neoplasm
Melanoma
Pharynx, neoplasm
Prostate gland
Stomach
Stomach, neoplasm
(preparation of modified uronic acid-containing polysaccharides for treatment of
cancer)
IT Laminins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of modified uronic acid-containing polysaccharides for treatment of
cancer)
IT **Polysaccharides, preparation**
Uronic acids
RL: BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP

(Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of modified uronic acid-containing polysaccharides for treatment of
cancer)
IT Carcinoma
(squamous cell, pharyngeal; preparation of modified uronic acid-containing polysaccharides for treatment of cancer)
IT Lung
(toxicity; preparation of modified uronic acid-containing polysaccharides for
treatment of cancer)

L31 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:640678 HCAPLUS
DN 127:264496
ED Entered STN: 09 Oct 1997
TI Branched pectin material
IN **Platt, David**
PA Platt, David, USA
SO PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07H001-00
ICS C08B037-06; A01N043-04
CC 44-7 (Industrial **Carbohydrates**)
Section cross-reference(s): 33, 43, 63

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9734907	A1	19970925	WO 1997-US4205	19970318
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2249215	AA	19970925	CA 1997-2249215	19970318
CA 2249215	C	20040921		
AU 9725321	A1	19971010	AU 1997-25321	19970318
AU 714164	B2	19991223		
EP 888366	A1	19990107	EP 1997-916793	19970318
EP 888366	B1	20040609		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CN 1222913	A	19990714	CN 1997-193969	19970318
BR 9708122	A	20000118	BR 1997-8122	19970318
JP 2001500171	T2	20010109	JP 1997-533589	19970318
AT 268780	E	20040615	AT 1997-916793	19970318
PRAI US 1996-13836P	P	19960321		
WO 1997-US4205	W	19970318		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9734907	ICM	C07H001-00
	ICS	C08B037-06; A01N043-04
WO 9734907	ECLA	C07H003/06; C08B037/00M5

AB The material useful for therapeutic application has a rhamnogalacturan backbone with side chains of neutral sugars dependent therefrom. The first group of side chains comprises relatively short, straight, chains of neutral sugars, and a second group of side chains comprises highly

branched chains of neutral sugars. Galactose preferably comprises at least 6% of the neutral sugars, and the mol. weight of the modified pectin material is in the range of 5,000 to 100,000, and most preferably is 10,000.

ST modified pectin structural side chain; **galacturonic** rhamno structural side chain; rhamnogalacturan structural side chain

IT Polymer chains
(of branched pectin material)

IT **9000-69-5**, Pectin
RL: PRP (Properties)
(branched; structure of)

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FILE LAST UPDATED: 17 JAN 2005 <20050117/UP>
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FOR DETAILS. <<<

=> d all abeq tech abex tot

L72 ANSWER 1 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2004-593312 [57] WPIX
DNC C2004-215770
TI Composition used for treating e.g. renal cancer, sarcoma, Kaposi's sarcoma, chronic leukemia, breast cancer, mammary adenocarcinoma and ovarian carcinoma, comprises modified **polysaccharides** in combination with anticancer drugs.
DC A11 A96 B05 B07
IN **PLATT, D**
PA (PROP-N) PRO-PHARM INC
CYC 108
PI WO 2004064777 A2 20040805 (200457)* EN 28 A61K000-00
RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE

LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE
DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG
KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ
OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG
US UZ VC VN YU ZA ZM ZW

ADT WO 2004064777 A2 WO 2004-US747 20040114

PRAI US 2003-440496P 20030116

IC ICM A61K000-00

AB WO2004064777 A UPAB: 20040907
NOVELTY - Combination (A) comprises modified **polysaccharide** (I) of molecular weight of 5-60 kD with less than 5% esterified saccharide backbone and containing repeating units comprising **uronic acids**, at least one attached neutral monosaccharide and at least one side chain of **oligosaccharides** attached to the backbone of neutral **oligosaccharides** or their derivatives, combined with an anticancer drug (II).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the preparation of (I).

ACTIVITY - Cytostatic.
Tests are described, but no results are given.

MECHANISM OF ACTION - None given.

USE - Used for treating cancer (renal cancer, sarcoma, Kaposi's sarcoma, chronic leukemia, breast cancer, mammary adenocarcinoma, ovarian carcinoma, rectal cancer, colon cancer, bladder cancer, prostrate cancer, melanoma, mastocytoma, lung cancer, throat cancer, pharyngeal squamous cell carcinoma, gastrointestinal cancer or stomach cancer) and for inhibiting metastasis (all claimed).

ADVANTAGE - (I) reversibly interacts with (II) and effectively delivers (II) along with itself, improving the pharmacological index as compared to that of (II) alone.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: A03-A01; A12-V01; B01-A02; B01-B02; B01-B03; B01-C02; B01-C03; B01-C04; B01-C05; B02-Z; B03-A; B04-B03A; B04-C01B; B04-C01G; **B04-C02**; **B04-C03D**; B04-G21; B04-H05A; B04-L05C; B04-N04A; B05-A03; B05-B01G; B05-B01J; B05-C01; B05-C07; B06-H; B07-H; B08-D02; B09-D02; B10-A03; B10-A09A; B10-A09B; B10-A10; B10-A13D; B10-A19; B10-B01A; B10-B01B; B10-B02A; B10-B03B; B10-B04B; **B10-C02**; B10-D03; B10-E02; B10-H02E; B14-H01

TECH UPTX: 20040907
TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preparation: Claimed preparation of (I) comprises selection of a composition having average molecular weight of 45-400 kD with a saccharide backbone (also comprising **uronic acid** saccharides and neutral monosaccharides and having 5-95% esterification and side chains) and at least one **oligosaccharide** side chain having secondary branching and performing a three-part chemical reaction consisting of depolymerizing the saccharide backbone, debranching the side chains and de-esterifying the saccharide acid esters.
Preferred Components: The **uronic acid** saccharide of the backbone further comprises xylose, **arabinose**, ribose, lyxose, **glucose**, allose, altrose, idose, talose, **galactose**, gulose, mannose, fructose, psicose, sorbose or tagatose. The **uronic acid** saccharides further comprise **galacturonic** acid. The neutral monosaccharides further comprise **rhamnose**. The average molecular weight of (I) is 5-60 (preferably 25) kD. The backbone is de-esterified.
The **oligosaccharide** side chain (preferably one in twenty neutral monosaccharides) is attached to the backbone via a neutral (preferably **rhamnose**) monosaccharide. The **oligosaccharide** side chain further comprises **galactose**, mannose, **glucose**, allose, altrose, idose, talose, gulose, **arabinose**, ribose, lyxose,

xylose, fructose, psicose, sorbose, tagatose, **rhamnose**, fucose, quinovose, 2-deoxy-ribose or their derivatives and terminates with **galactose**, **arabinose**, **rhamnose**, **glucose** or their derivatives (preferably with a **galactose** or a feruloyl group). The **oligosaccharide** side chain either lacks secondary branches of saccharides or has multiple secondary branches.
Preferred Method: Depolymerization of the composition is one part of the three-part chemical reaction, which further comprises treating the composition with an alkaline solution to provide a final pH of 10. The debranching and de-esterifying occurs following the depolymerization and further comprise treating the depolymerized composition with time temperature controlled reaction at a pH of 10 and treating with an acidic solution with time temperature controlled reaction at pH 3.

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Compounds: (II) is selected from aminoglutethimide, amsacrine anastrozole, asparaginase, bicalutamide, bleomycin, buserelin, busulfan, capecitabine, carboplatin, carmustine, chlorambucil, cisplatin, cladribine, clodronate, cyclophosphamide, cyproterone, cytarabine, dacarbazine, dactinomycin, daunorubicin, dexamethasone, diethylstilbestrol, docetaxel, doxorubicin, epirubicin, estramustine, etoposide, exemestane, filgrastim, fludarabine, fludrocortisone, fluorouracil, fluoxymesterone, flutamide, gemcitabine, goserelin, hydroxyurea, idarubicin, ifosfamide, imatinib, interferon alpha, irinotecan, letrozole, leucovorin, leuprolide, levamisole, lomustine, mechlorethamine, medroxyprogesterone, megestrol, melphalan, mercaptopurine, mesna, methamycins, methotrexate, mitomycin, mitotane, mitoxantrone, nilutamide, octreotide, oxaliplatin, paclitaxel, pamidronate, pentostatin, plicamycin, porfimer, procarbazine, raltitrexed, rituximab, streptozocin, tamoxifen, temozolomide, teniposide, testosterone, thioguanine, thiotepa, topotecan, trastuzumab, tretinoin, vinblastine, vincristine, vindesine, vinorelbine, daunomycin, doxorubicin or vinblastine or a taxine drug comprising taxol, taxotere, spicatin, taxane-2,13-dione, 5beta, 9beta,10beta-trihydroxy-, cyclic 9,10-acetal with acetone, acetate, taxane-2,13-dione, 5beta 9beta, 10beta-trihydroxy-trihydroxy-, cyclic 9,10-acetal with acetone, taxane-2beta,5beta 9beta,10beta-tetrol, cyclic 9,10-acetal with acetone, taxane, cephalomannine-7-xyloside, 7-epi-10-deacetylcephalomannine, 10-deacetylcephalomannine, cephalomannine, taxol B, 13-(2', 3'-dihydroxy-3'-phenylpropionyl)baccatin III, yunnanxol, 7-(4-azidobenzoyl)baccatin III, N-debenzoyltaxol A, O-acetylbaccatin IV, 7-(triethylsilyl)baccatin III, 7,10-di-O-((2,2,2-trichloroethoxy)carbonyl)baccatin III, baccatin III 13-O-acetate, baccatin diacetate, baccatin, baccatin VII, baccatin VI, baccatin IV, 7-epi-baccatin III, baccatin V, baccatin I, baccatin III, baccatin A, 10-deacetyl-7-epitaxol, epitaxol, 10-deacetyltaxol C, 7-xylosyl-10-deacetyltaxol, 10-deacetyltaxol-7-xyloside, 7-epi-10-deacetyltaxol, 10-deacetyltaxol or 10-deacetyltaxol B.

ABEX UPTX: 20040907
ADMINISTRATION - Administration is oral, intravenous, subcutaneous, topical, intraperitoneal and/or intramuscular (claimed) at 10-1000 mg/kg/day.

EXAMPLE - None given.

L72 ANSWER 2 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **2002-731110** [79] WPIX
DNC C2002-207096
TI New modified **polysaccharide** compounds are cell adhesion inhibitors used for treating cancer and cancer metastasis.
DC A96 B04
IN **PLATT, D**
PA (PLAT-I) PLATT D

CYC 1
PI US 2002107222 A1 20020808 (200279)* 14 A61K031-715 <--
ADT US 2002107222 A1 **CIP of US 1993-24487 19930301**, US 2002-41350 20020108
PRAI US 2002-41350 20020108; **US 1993-24487 19930301**
IC ICM **A61K031-715**
ICS **C08B037-00**
AB US2002107222 A UPAB: 20021209
NOVELTY - New **polysaccharide** compounds (I) having an average molecular weight of 15-60 kD comprise a backbone that is less than 5% esterified and comprises repeat units comprising **uronic acid** molecules, with at least one neutral monosaccharide attached to each repeat unit, and at least one side chain comprising neutral saccharides or saccharide derivatives attached to the backbone.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for production of (I) which comprises depolymerizing, debranching and deesterifying a **polysaccharide** that has an average molecular weight of 45-400000 kD and comprises a backbone that is 5-95% esterified and comprises **uronic acid** saccharides and neutral monosaccharides and side chains, at least one of which has secondary branching.

ACTIVITY - Cytostatic.
Test details are described but no results given.
MECHANISM OF ACTION - None given in the source material.
USE - (I) are cell adhesion inhibitors useful for preventing or treating cancer and cancer metastasis, especially renal cancer, sarcoma, Kaposi's sarcoma, chronic leukemia, breast cancer, mammary adenocarcinoma, ovarian cancer, rectal cancer, colon cancer, bladder cancer, prostate cancer, melanoma, mastocytoma, lung cancer, throat cancer, pharyngeal squamous cell carcinoma, gastrointestinal cancer or stomach cancer.
Dwg.0/4
FS CPI
FA AB; DCN
MC CPI: A03-A00A; A10-E05C; A12-V01; **B04-C02**; B14-H01
TECH UPTX: 20021209
TECHNOLOGY FOCUS - POLYMERS - Preferred Compounds: The backbone of (I) comprises repeat units comprising **galacturonic** acid units with a **rhamnose** molecule attached to each repeat unit. The backbone also includes xylose, **arabinose**, ribose, lyxose, **glucose**, allose, altrose, idose, talose, **galactose**, gulose, mannose, fructose, psicose, sorbose or tagatose units. The side chains comprise **galactose**, mannose, **glucose**, allose, altrose, idose, talose, gulose, **arabinose**, ribose, lyxose, fructose, psicose, sorbose, tagatose, **rhamnose**, fucose, quinovose or 2-deoxyribose units attached to the **rhamnose** molecules. The side chains have terminal **galactose** units or feruloyl groups. The molecular weight is 20-40 kD, especially 25 kD.
Preferred Process: Depolymerization is effected by treating the **polysaccharide** with an alkaline solution at pH 10 and debranching and deesterification are effected with an acidic solution at pH 3.
ABEX UPTX: 20021209
ADMINISTRATION - The dosage is 10-1000 mg/kg/day orally, intravenously, subcutaneously, topically, intraperitoneally or intramuscularly.

EXAMPLE - A starting **polysaccharide** (unspecified) was sterilized by ultraviolet irradiation, dissolved in water and adjusted to pH 10, e.g. with 3 N sodium hydroxide. After a period, e.g. 30 minutes to 48 hours, the solution was adjusted to pH 3, e.g. with 3 N hydrochloric acid. After a period e.g. 30 minutes to 6 hours,the solution was adjusted to pH 6-7. Conditions were selected to give a modified **polysaccharide** with a molecular weight of 15, 20, 25, 30, 35 or 40 kD. The modified **polysaccharide** was washed with 70% ethanol and dried with 100%

acetone.

L72 ANSWER 3 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2002-723494 [78] WPIX
DNC C2002-204958
TI Pharmaceutical formulation useful for the treatment of cancer comprises a mixture of **galactomannan polysaccharide** and a chemotherapeutic agent.
DC B04 B05
IN KLYOSOV, A; **PLATT, D**
PA (KLYO-I) KLYOSOV A; (PLAT-I) PLATT D; (PROP-N) PRO-PHARM INC
CYC 22
PI WO 2002076474 A1 20021003 (200278)* EN 34 A61K031-715 <--
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
W: JP
US 2003064957 A1 20030403 (200325) A61K031-715 <--
US 6645946 B1 20031111 (200382) A01N043-04
EP 1383516 A1 20040128 (200409) EN A61K031-715 <--
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR
US 2004038916 A1 20040226 (200416) A61K031-736
US 2004038935 A1 20040226 (200416) A61K031-736
JP 2004525143 W 20040819 (200455) 58 A61K047-36
ADT WO 2002076474 A1 WO 2002-US9524 20020327; US 2003064957 A1 CIP of US 2001-818596 20010327, Provisional US 2001-317092P 20010904, US 2002-108237 20020327; US 6645946 B1 US 2001-818596 20010327; EP 1383516 A1 EP 2002-731178 20020327, WO 2002-US9524 20020327; US 2004038916 A1 Div ex US 2001-818596 20010327, US 2003-649131 20030827; US 2004038935 A1 Div ex US 2001-818596 20010327, US 2003-649130 20030827; JP 2004525143 W JP 2002-574987 20020327, WO 2002-US9524 20020327
FDT EP 1383516 A1 Based on WO 2002076474; US 2004038916 A1 Div ex US 6645946; US 2004038935 A1 Div ex US 6645946; JP 2004525143 W Based on WO 2002076474
PRAI US 2001-317092P 20010904; US 2001-818596 20010327; US 2002-108237 20020327; US 2003-649131 20030827; US 2003-649130 20030827
IC ICM A01N043-04; **A61K031-715**; A61K031-736; A61K047-36
ICS A61K009-08; A61K009-14; A61K031-505; A61K031-513; **A61K031-70**; A61K031-704; A61K031-7072; A61K045-00; A61P035-00; **C07H001-08**; C07H013-00
AB WO 200276474 A UPAB: 20021204
NOVELTY - A pharmaceutical formulation comprises a mixture of **galactomannan** (GM) **polysaccharide** and a chemotherapeutic agent.

ACTIVITY - Cytostatic.

Albino swiss mice were used as the experimental animals for measuring toxicity of formulation. There were a total of seven groups of 10 animals each, subcutaneously implanted with COLD 205 human colon tumor xenografts. The groups were treated on day 13 after tumor implantation (except for the last group that was treated for comparative purposes with a lower dose of **galactomannan** alone) as follows: Saline (NaCl. 0.9%) (control), 5-FU (75 mg/kg), **Galactomannan** (120 mg/kg), 5-FU (75 mg/kg) + **Galactomannan** (120 mg/kg), 5-FU (375 mg/kg), 5-FU (375 mg/kg) + **Galactomannan** (120 mg/kg) and **Galactomannan** (60 mg/kg) for five consecutive days. The animal response in the five groups in terms of median days to 2X doubling of tumor weight/animals with small tumors/tumor complete regression were: for saline 12.5/0/0, for 5-FU: 23.7/1/0, for **galactomannan** 15.5/1/0, for 5-FU+GM 56.0/4/1 and for GM 20/0/0 respectively.

MECHANISM OF ACTION - None given in the source document.

USE - The formulation is used in the treatment of cancers e.g. chronic leukemia, breast cancer, sarcoma, ovarian carcinoma, rectal cancer, throat cancer, melanoma, colon cancer, bladder cancer, lung cancer, mammary adenocarcinoma, gastrointestinal cancer, stomach cancer, prostate cancer, pancreatic cancer and Kaposi's sarcoma in humans

(claimed).
ADVANTAGE - The formulation has a reduced toxicity and has enhanced efficacy of greater than 50, preferably greater than 80% compared with the same dose of the agent without **galactomannan**. The formulation containing the **galactomannan polysaccharide** and the chemotherapeutic agent provides synergistic effects to target and kill tumor cells.
Dwg.0/0

FS CPI
FA AB; DCN
MC CPI: **B04-C02**; B07-A02B; B07-D12; B14-H01
TECH UPTX: 20021204
TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Compounds: GM has a molecular weight 20,000 - 600,000 (preferably 40,000 - 200,000) Dalton. The average molecular weight of GM is 48,000 (preferably 215,000) Dalton. GM is a derivative of an isolate from Gleditsia triacanthos, Medicago falcata, or Cyamopsis tetragonoloba. The ratio of mannose to **galactose** is 1-3 (preferably 2.2-1).
Preferred Formulation: The ratio of GM and chemotherapeutic agent is 0.1-10.1 w/w.
ABEX UPTX: 20021204
SPECIFIC COMPOUNDS - beta-1,4 D-**galactomannan** is specifically claimed as GM. Adriamycin and 5-fluorouracil (5-FU) are specifically claimed as the chemotherapeutic agent.

ADMINISTRATION - The formulation is administered parenterally, in the form of a powder or liquid (claimed). No dosage given.

L72 ANSWER 4 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2002-416431 [44] WPIX
DNC C2002-117438
TI Compound, useful for the treatment of proliferative disease, high cholesterol, depression, asthma, hypertension and bacterial infections, comprising a therapeutic agent, a spacer and a **galactose**.
DC B03
IN KLYOSOV, A; **PLATT, D**
PA (KLYO-I) KLYOSOV A; (PLAT-I) PLATT D; (PROP-N) PRO-PHARM INC
CYC 97
PI WO 2002026262 A2 20020404 (200244)* EN 19 A61K047-00
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
US 2002068077 A1 20020606 (200244) A61K031-70 <--
AU 2001092993 A 20020408 (200252) A61K047-00
US 6642205 B2 20031104 (200374) A61K009-127
EP 1363673 A2 20031126 (200380) EN A61K047-48
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
US 2003229028 A1 20031211 (200382) A61K031-704
ADT WO 2002026262 A2 WO 2001-US29754 20010924; US 2002068077 A1 Provisional US 2000-235141P 20000925, US 2001-961681 20010924; AU 2001092993 A AU 2001-92993 20010924; US 6642205 B2 Provisional US 2000-235141P 20000925, US 2001-961681 20010924; EP 1363673 A2 EP 2001-973411 20010924, WO 2001-US29754 20010924; US 2003229028 A1 Provisional US 2000-235141P 20000925, Cont of US 2001-961681 20010924, US 2003-354750 20030624
FDT AU 2001092993 A Based on WO 2002026262; EP 1363673 A2 Based on WO 2002026262
PRAI US 2000-235141P 20000925; US 2001-961681 20010924; US 2003-354750 20030624
IC ICM A61K009-127; **A61K031-70**; A61K031-704; A61K047-00;

A61K047-48
ICS C07H001-00; C07H015-24
AB WO 200226262 A UPAB: 20020711
NOVELTY - Compound (I), comprising:
(1) a therapeutic agent (a);
(2) a spacer (b), covalently linked to the therapeutic agent at a first site; and
(3) a **galactose** (c), covalently linked to a second site on the spacer via an ether linkage.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:
(1) Preparation of (I);
(2) A method for treating a chronic disease comprising administering (I); and
(3) A method for treating a medical condition, to reduce side effects associated with a therapeutic agent, comprising:
(a) providing as a conjugate, the therapeutic agent covalently linked to a spacer at a first site and the spacer being covalently linked to **galactose** at a second site; and
(b) administering the conjugate.
ACTIVITY - Cytostatic; Antiasthmatic; Antidepressant; Hypotensive; Antibacterial; Anticholesterol.
The antitumor effect of a **galactomycin** conjugate was compared with Adriamycin in male BDFI mice. The **galactomycin** was significantly less toxic than Adriamycin. A dose of Adriamycin (14 mg/kg) resulted in 2 toxic deaths out of 6 animals, whereas the **galactomycin** conjugate 40 mg/kg resulted in only one death. The weight loss of the animals was reduced for the **galactomycin** conjugate.
MECHANISM OF ACTION - None given.
USE - (I) is used for the treatment of a proliferative disease, e.g. tumor or lymphocytic leukemia, high cholesterol, depression, asthma, hypertension and bacterial infections (claimed).
ADVANTAGE - (I) reduces the side effects of the therapeutic agent without loss of efficacy.
Dwg.0/2
FS CPI
FA AB; DCN
MC CPI: **B04-C02X**; B07-A02B; B10-A07; B10-B03B; B14-A01; B14-D02A2; B14-F02B; B14-H01; B14-J01A2; B14-K01A
TECH UPTX: 20020711
TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Spacer: (b) is polyhydroxylated, preferably an aldose or a ketose, especially an open chain saccharide selected from a triose, a tetrose, a pentose, a hexose or a septose, especially a hexose. The spacer linked to **galactose** is CH2OH-(CHOH)n-CH2-O-(**galactose**) where n at least 0 and at most 20 or CH2OH-(CHOH1)n-CH-(O-(**galactose**))-(CHOH)m-CH2OH where m at least 0 and less than 20. The first site is separated from the second site by at least two carbons.
Preferred Compound: (I) further comprises an agent linked to CH2(CHOH)n-CH2-O-(**galactose**) where n at least 0 and at most 20 or the agent is linked to CH2(CHOH)n-CH-(O-(**galactose**))-(CHR2)m-CH2OH where m at least 0 and less than 20. (I) further comprises N-(beta-D-**galactopyranosyl**-(1-4)-beta-O-D-sorbityl)doxorubicin or N-(beta-D-**galactopyranosyl**-(1-6)-beta-O-D-sorbityl)doxorubicin.
Preferred Agents: (a) is Adriamycin and the spacer is covalently linked to an amine group on daunosamine. A covalent linkage is formed with a reactive group (preferably amino, alkoxy, hydroxy, carbonyl, carboxylic, halogen or thiol) on the therapeutic agent.
Preferred **Galactose** (b) is linked to the spacer by means of a glycosidic linkage.
Preparation: Preparation of (I) comprises:
(i) providing a therapeutic agent and a spacer linked to **galactose**

;
(ii) protecting reactive groups on the therapeutic agent other than at a reactive site for linking to the spacer
(iii) reacting the protected therapeutic agent with the spacer linked to **galactose**; and
(iv) deprotecting the therapeutic agent.

ABEX UPTX: 20020711
ADMINISTRATION - Dosage is 0.001-100 (preferably 0.01-50, especially 0.1-10) mg/kg body weight. Administration is orally, rectally, topically, parentally (including subcutaneously, intramuscularly, or intravenously), passing through mucosal membrane, transdermally, ocularly, pulmonary, or nasally

EXAMPLE - Bromine (0.1 ml) was added to daunorubicin (1.3 g) in methanol (MeOH) (20 ml), dioxane (10 ml) and ethylchloroformate (10 ml), and the reaction was stirred for 1 hour. Potassium carbonate (0.44 g) was then added and the precipitate was evaporated. The resulting crude 13-dimethylkethal-14-bromodaunorubicin (1.5 g) was dissolved in methanol (65 ml), and melibiose (3.4 g) in water (30 ml) was added. The reaction was stirred at 40 degreesC for 4 hours and sodium cyanoborohydride (NaCNBH3) (0.275 g, 4 m Mol) in MeOH was added and the mixture stirred at 37 degreesC for 24 hours. Further NaCNBH3 was added until the reaction went to completion.
Work-up produced a dark residue which was dissolved in 0.25 N hydrobromic acid (HBr)-methanol (1:1) (200 ml) and combined with the red extracts. The combined extracts were incubated for 6 hours at 37 degreesC, then sodium formate (HCOONa) (1.5 g in 1 ml) of water was added to hydrolyze the 14-Br group. The reaction was kept at 37 degreesC for 24 hours. The resulting crude solution was the conjugate of doxorubicine with melibiose. It was diluted with water (500 ml) and sorbent XAD-2 (100 ml), and stirred at room temperature for 6 hours until the red color had disappeared. Work-up gave pure **Galactomycin** I conjugate (390 mg).

L72 ANSWER 5 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2000-543444 [49] WPIX
DNC C2000-161702
TI Novel gene therapy material comprising a nucleic acid and a modified pectin used e.g. in the delivery of apoptotic genes to tumor cells.
DC B04 B07 D16
IN CHANG, Y; **PLATT, D**
PA (SAFE-N) SAFESCIENCE INC
CYC 91
PI WO 2000045825 A1 20000810 (200049)* EN 30 A61K031-715 <--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
AU 2000026371 A 20000825 (200059) A61K031-715 <--
EP 1261354 A1 20021204 (200280) EN A61K031-715 <--
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI
US 6500807 B1 20021231 (200305) A01N043-04
JP 2003503308 W 20030128 (200309) 24 A61K048-00
ADT WO 2000045825 A1 WO 2000-US2628 20000202; AU 2000026371 A AU 2000-26371 20000202; EP 1261354 A1 EP 2000-904645 20000202, WO 2000-US2628 20000202; US 6500807 B1 Provisional US 1999-118244P 19990202, US 2000-495675 20000201; JP 2003503308 W JP 2000-596944 20000202, WO 2000-US2628 20000202
FDT AU 2000026371 A Based on WO 2000045825; EP 1261354 A1 Based on WO 2000045825; JP 2003503308 W Based on WO 2000045825
PRAI US 2000-495675 20000201; US 1999-118244P 19990202
IC ICM A01N043-04; **A61K031-715**; A61K048-00

ICS A61K009-52; A61K009-62; A61K031-7105; A61K031-711; A61K035-74; A61K035-76; A61K047-06; A61K047-36; A61P035-00; C12N015-00; C12N015-63; C12N015-85

AB WO 200045825 A UPAB: 20001006
NOVELTY - A gene therapy material comprising a nucleic acid and a modified pectin, is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) a method for delivering a gene to a cell of a patient, the cell comprising cell surface expressed carbohydrate binding sites, comprising:
(a) providing a therapeutic material;
(b) incorporating the material into a body of modified pectin, producing a therapeutic composition; and
(c) administering the composition to the patient; and
(2) a gene therapy material comprising;
(a) a nucleic acid;
(b) a carbohydrate material substantially encapsulating the nucleic acid; and
(c) a protective covering surrounding the carbohydrate.
ACTIVITY - Cytostatic. Cancer cells (MCF-7 and MCF-7/neo human breast cancer cell lines) were implanted into nude mice to form tumors. The body weight and surface area of the tumor were measured. The mice were treated with a tail injection of cytosine deaminase DNA for a week and observed for a further 60 days. At the end of the trial 24/31 and 23/31 mice were found to be completely free of cancer.
MECHANISM OF ACTION - Gene therapy.
USE - The gene therapy material is useful for delivering DNA to a subject or especially to a tumor within a subject.
Dwg.0/0

FS CPI
FA AB; DCN
MC CPI: B04-C02E3; B04-E01; B04-E08; B04-F11; B12-M07; B12-M11F; B14-H01B; B14-S03; D05-H12A; D05-H12E

TECH UPTX: 20001006
TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Nucleic Acid: The nucleic acid is DNA or RNA and is disposed within at least one vector. The vector comprises a plasmid, phagemid, cosmid, bacteriophage, liposome or virus, especially a DNA, RNA, baculo- or retrovirus. The preferred DNA virus is an adeno- or adeno-associated virus. The nucleic acid comprises a cytosine deaminase, tumor suppressor, angiostatic or apoptotic gene.
Preferred Material: The protective covering comprises chitin or chitosan.
Preparation: The DNA was mixed with modified pectin and sonicated to produce a micellular structure. These micelles were subsequently coated with chitosan.

ABEX UPTX: 20001006
ADMINISTRATION - Dosage is 0.05 - 1.06 mg/kg day of carbohydrate with 0.00005 - 0.106 mg/kg day of nucleic acid (i.e. 10:1). Administration is oral or parenteral, especially direct injection into the patient or the tumor.

L72 ANSWER 6 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 1999-600535 [51] WPIX
DNC C1999-174806
TI Composition for controlling fungal disease in plants.
DC A11 A97 C03
IN BEN-SHALOM, N; **PLATT, D**
PA (ISRA) ISRAEL MIN AGRIC; (BENS-I) BEN-SHALOM N; (PLAT-I) PLATT D
CYC 87
PI US 5965545 A 19991012 (199951)* 10 A61K031-725
WO 2000059949 A1 20001012 (200053)# EN C08B037-08 <--
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB

GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU
LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR
TT UA UG US UZ VN YU ZA ZW

AU 9934731 A 20001023 (200107)# C08B037-08 <--
EP 1185560 A1 20020313 (200225)# EN C08B037-08 <--
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
MX 2001010067 A1 20030701 (200425)# A01N043-04

ADT US 5965545 A CIP of US 1996-730366 19961015, US 1997-928370 19970912; WO 2000059949 A1 WO 1999-US7504 19990406; AU 9934731 A AU 1999-34731 19990406, WO 1999-US7504 19990406; EP 1185560 A1 EP 1999-916403 19990406, WO 1999-US7504 19990406; MX 2001010067 A1 WO 1999-US7504 19990406, MX 2001-10067 20011005

FDT AU 9934731 A Based on WO 2000059949; EP 1185560 A1 Based on WO 2000059949; MX 2001010067 A1 Based on WO 2000059949

PRAI US 1997-928370 19970912; US 1996-730366 19961015;
WO 1999-US7504 19990406; AU 1999-34731 19990406;
EP 1999-916403 19990406; MX 2001-10067 20011005

IC ICM A01N043-04; A61K031-725; **C08B037-08**
ICS A01N043-16; A61K031-73

AB US 5965545 A UPAB: 19991207
NOVELTY - Composition for controlling fungal disease in plants comprises chitosan or chitin oligomers, and chitosan.

DETAILED DESCRIPTION - Composition for controlling fungal disease in plants comprises:

(a) an antifungal agent selected from:

(i) chitosan derived oligomers of molecular weight 4000 to less than 10000 Da; and/or

(ii) chitin derived oligomers of molecular weight 500-2000 Da; and

(b) chitosan of molecular weight 200000 Da.

ACTIVITY - Antifungal.

A blend mixture containing 75 % chitosan and 25 % of a chitosan/chitin oligomer mixture was applied in the form of a 0.1 % solution onto leaves of a potato plant. 3 Day later the treated leaves where inoculated with spores (105) of Phytophtora infestans. The severity of fungal disease was evaluated after 4 days, and the composition gave 91.0 % control of the fungus.

MECHANISM OF ACTION - None given.

USE - The composition is used to control fungal disease in plants (claimed), e.g. Botrytis cinerea, Alternaria alternaria, Downey mildew, Gypsophilia paniculata, and Phytophtora infestans.

ADVANTAGE - The composition is derived from natural sources, and has extremely low toxicity to animals and agricultural crops. The composition is stable, water soluble, easy to handle and inexpensive to produce.

Dwg.0/0

FS CPI
FA AB; DCN
MC CPI: A03-A00A; A08-M02; A10-E09; A12-W04C; C04-C02E3; C14-A06
TECH UPTX: 19991207

TECHNOLOGY FOCUS - POLYMERS - Preferred Composition: The antifungal agent is present in amount 10-25 wt. % and the chitosan is present in amount 75-90 wt. %. The antifungal agent comprises a 1:1 mixture of chitosan and chitin oligomers.

TECHNOLOGY FOCUS - AGRICULTURE - Preferred Components: The antifungal agent is present in amount 10-25 wt. % and the chitosan is present in amount 75-90 wt. %. The composition may further comprise a solvent, preferably an aqueous solution of an acid having a pH of 4-8.

L72 ANSWER 7 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 1999-357709 [30] WPIX
DNN N1999-266330 DNC C1999-105822
TI Reagent for magnetic resonance imaging of cancerous tumour in vivo.
DC B02 B04 P31

IN PLATT, D
PA (PLAT-I) PLATT D
CYC 82
PI WO 9926535 A1 19990603 (199930)* EN 18 A61B005-055
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW
AU 9914643 A 19990615 (199944)
EP 1032304 A1 20000906 (200044) EN A61B005-055
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
CN 1299249 A 20010613 (200158) A61B005-055
JP 2001523693 W 20011127 (200204) 14 A61K049-00
ADT WO 9926535 A1 WO 1998-US24663 19981119; AU 9914643 A AU 1999-14643 19981119; EP 1032304 A1 EP 1998-958644 19981119, WO 1998-US24663 19981119; CN 1299249 A CN 1998-812156 19981119; JP 2001523693 W WO 1998-US24663 19981119, JP 2000-521746 19981119
FDT AU 9914643 A Based on WO 9926535; EP 1032304 A1 Based on WO 9926535; JP 2001523693 W Based on WO 9926535
PRAI US 1998-195341 19981118; US 1997-67081P 19971120
IC ICM A61B005-055; A61K049-00
ICS **A61K031-70**; **A61K031-715**; A61K041-00; A61P035-00
AB WO 9926535 A UPAB: 19990802
NOVELTY - A reagent for magnetic resonance imaging of a cancerous tumour in vivo, comprises a carbohydrate, which is capable of binding to or penetrating a cancerous cell, having a paramagnetic atom bonded to it and a carrier.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for:
(a) a method for treating a tumour cell, comprising delivering to the cell carbohydrate capable of binding to or penetrating the cell having a paramagnetic atom bonded to one of its carbon atoms, allowing for the binding or penetrating of the carbohydrate to the cell, and exposing the cell to a magnetic field of sufficient flux and frequency to cause resonance in the paramagnetic atom of the carbohydrate, so that a Curie temperature of greater than 60 deg. C is generated within the tumour;
(b) a reagent for the treatment of a tumour cell, comprising a carbohydrate selected from mono-saccharides, disaccharides and **polysaccharides**, the carbohydrate having an iron atom bonded to it.
ACTIVITY - Diagnosis - Neoplasm; Diagnosis-in-vivo; Imaging-agent; Cytostatic.
MECHANISM OF ACTION - MECHANSIM OF ACTION - Imaging.
USE - The method can be used for selectively killing tumour cells through localised magnetically coupled, RF induced hyperthermia.
ADVANTAGE - The method has reduced toxicity and increased selectivity of tumour uptake. The method manipulates the ability of cells and especially tumour cells to accumulate carbohydrates from the blood stream. A growing tumour mass accumulates a greater per cell percentage of available carbohydrates than will surrounding, non-replicating tissue. The reagents enhance the efficacy of known chemotherapeutics without directly killing the cell by means of hyperthermia.
Dwg.0/1
FS CPI GMPI
FA AB; GI; DCN
MC CPI: **B04-C02**; **B04-C02X**; B04-D01; B05-A03; B11-C08A; B12-K04A1; B12-M11F; B14-H01
TECH UPTX: 19990802
TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Reagent: The paramagnetic atom is gadolinium. The carbohydrate is D-**glucose** and the gadolinium atom is bonded to its 2' position or the carbohydrate is a **glucose** isomer and the paramagnetic atom is bonded either to its

2' or 3' position. The carrier comprises liposomes which encapsulate the carbohydrate. Preferred Method: The paramagnetic atom is Cu, Cr, Co, Dy, Er, Eu, Fe, Gd, Mn, Ni or Yb.

ABEX UPTX: 19990802

SPECIFIC COMPOUNDS - The carbohydrate is gadolinium **glucoside**.

ADMINSTRATION - Dosage is 1-5 mg/kg administered e.g. nasally, orally, intramuscularly, subcutaneously or intravenously.

EXAMPLE - None given.

L72 ANSWER 8 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 1998-286433 [25] WPIX
DNC C1998-088643
TI Material from treatment of fungal diseases in animals - comprises oligomers, with molecular weight of 4000-18000 daltons comprising linked repeat units of beta-**glucosamine**.
DC B04 C03
IN **PLATT, D**
PA (PLAT-I) PLATT D
CYC 80
PI WO 9816236 A1 19980423 (199825)* EN 23 A61K031-70 <--
RW: AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW
AU 9748176 A 19980511 (199837) A61K031-70 <--
US 5891861 A 19990406 (199921) A61K031-73
EP 964685 A1 19991222 (200004) EN A61K031-70 <--
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
CN 1237108 A 19991201 (200015) A61K031-70 <--
ADT WO 9816236 A1 WO 1997-US18430 19971015; AU 9748176 A AU 1997-48176 19971015; US 5891861 A US 1996-730367 19961015; EP 964685 A1 EP 1997-910914 19971015, WO 1997-US18430 19971015; CN 1237108 A CN 1997-199631 19971015
FDT AU 9748176 A Based on WO 9816236; EP 964685 A1 Based on WO 9816236
PRAI US 1996-730367 19961015
IC ICM **A61K031-70**; A61K031-73
ICS A61K031-735
AB WO 9816236 A UPAB: 19980715
Therapeutic material, for treatment of fungal diseases in animals comprises oligomers comprising linked repeat units of beta - **glucosamine**. The oligomers have a molecular weight of 4000-18000 Da.
USE - The oligomeric material may be used against fungi, including strains which are resistant to conventional fungicidal materials. It may be used in treatment of infections caused by Candida or Aspergillus.
Administration is especially oral, but may also be intravenous.
ADVANTAGE - The material shows good heat and pH stability, which simplifies storage and handling. It is not degraded by gastric acids.
Dwg.0/2
FS CPI
FA AB; DCN
MC CPI: B04-C02E3; C04-C02E3; **B04-C02X**; **C04-C02X**; B14-A04A; C14-A04A; B14-A04B; C14-A04B

L72 ANSWER 9 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 1998-018003 [02] WPIX
DNC C1998-006598
TI Modified pectin with **rhamno**-galacturan backbone - and straight and branched chain neutral sugar side chains, useful for the treatment of

metastatic cancer.

DC B04
IN **PLATT, D**
PA (PLAT-I) PLATT D
CYC 75
PI WO 9734907 A1 19970925 (199802)* EN 16 C07H001-00 <--
RW: AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN
AU 9725321 A 19971010 (199806) C07H001-00 <--
EP 888366 A1 19990107 (199906) EN C07H001-00 <--
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
CZ 9803009 A3 19990217 (199913) C07H001-00 <--
NZ 332035 A 19990429 (199923) C07H001-00 <--
CN 1222913 A 19990714 (199946) C07H001-00 <--
AU 714164 B 19991223 (200011) C07H001-00 <--
BR 9708122 A 20000118 (200021) C07H001-00 <--
MX 9807683 A1 19990801 (200063) C07H001-00 <--
JP 2001500171 W 20010109 (200107) 11 C08B037-06 <--
EP 888366 B1 20040609 (200438) EN C07H001-00 <--
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
DE 69729443 E 20040715 (200446) C07H001-00 <--
CA 2249215 C 20040921 (200463) EN C08B037-06 <--
ADT WO 9734907 A1 WO 1997-US4205 19970318; AU 9725321 A AU 1997-25321 19970318; EP 888366 A1 EP 1997-916793 19970318, WO 1997-US4205 19970318; CZ 9803009 A3 WO 1997-US4205 19970318, CZ 1998-3009 19970318; NZ 332035 A NZ 1997-332035 19970318, WO 1997-US4205 19970318; CN 1222913 A CN 1997-193969 19970318; AU 714164 B AU 1997-25321 19970318; BR 9708122 A BR 1997-8122 19970318, WO 1997-US4205 19970318; MX 9807683 A1 MX 1998-7683 19980921; JP 2001500171 W JP 1997-533589 19970318, WO 1997-US4205 19970318; EP 888366 B1 EP 1997-916793 19970318, WO 1997-US4205 19970318; DE 69729443 E DE 1997-629443 19970318, EP 1997-916793 19970318, WO 1997-US4205 19970318; CA 2249215 C CA 1997-2249215 19970318, WO 1997-US4205 19970318
FDT AU 9725321 A Based on WO 9734907; EP 888366 A1 Based on WO 9734907; CZ 9803009 A3 Based on WO 9734907; NZ 332035 A Based on WO 9734907; AU 714164 B Previous Publ. AU 9725321, Based on WO 9734907; BR 9708122 A Based on WO 9734907; JP 2001500171 W Based on WO 9734907; EP 888366 B1 Based on WO 9734907; DE 69729443 E Based on EP 888366, Based on WO 9734907; CA 2249215 C Based on WO 9734907
PRAI US 1996-13836P 19960321
REP 1.Jnl.Ref; US 5547945
IC ICM **C07H001-00; C08B037-06**
ICS A01N043-04; A61K031-725
AB WO 9734907 A UPAB: 19980112
Modified pectin material has a **rhamnogalacturan** backbone comprising a repeating sequence of two **galacturonic** acid units followed by one **rhamnose** unit, and a first and a second group of side chains of neutral sugars are dependent from the backbone. The first group of side chains consists of straight chains of sugars and the second group of side chains consists of branched chains of neutral sugars. The side chains are attached through **rhamnose** units which are separated from one another by an intervening sequence comprising two **galacturonic** acid units, a **rhamnose** unit and two **galacturonic** acid units; the pectin has an average molecular mass of 5000-100000.

USE - The modified pectins are used in the treatment and prevention of metastatic cancer.

Dwg.0/1
FS CPI
FA AB

MC CPI: B04-C02D; B14-H01B

L72 ANSWER 10 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1995-157717** [21] WPIX
CR 1995-157716 [21]
DNC **C1995-072484**
TI New **polysaccharide**(s) extracted from Tanjin plant - used for treating nephrotic sundrome and liver disorders.
DC B04
PA (NICH-N) NIPPON CHEM RES KK
CYC 1
PI JP 07048403 A 19950221 (199521)* 11 C08B037-00 <--
JP 3161882 B2 20010425 (200126) 10 C08B037-00 <--
ADT JP 07048403 A **JP 1993-199275 19930715**; JP 3161882 B2 **JP 1993-199275 19930715**
FDT JP 3161882 B2 Previous Publ. JP 07048403
PRAI **JP 1993-160373 19930603**
IC ICM **C08B037-00**
ICS **A61K031-715**; A61K031-725; A61P001-16; A61P013-12
ICA A61K035-78
AB JP 07048403 A UPAB: 20010515
Polysaccharides are prepared by extraction of Tanjin, using water or water-containing solvent. The **polysaccharides** comprise 60-100 % saccharide comprising 40-80 % **uronic acid**; and 10-30 % neutral saccharide, and neutral saccharide content comprising 0-15 % **rhamnose**, 0-15 % **glucose**, 25-55 % **galactose**, 30-60 % of **arabinose** and 0-15 % of mannose. The Mn is 150,000-300,000.
USE - Used for treating nephrotic syndrome and liver disorders.
In an example, small pieces of Tanjin (10 kg) were extracted in water (10 l) at 80 deg. C. for 3 hrs. to give an extract solution The solution was condensed, and purified by chromatography to give the **polysaccharide** (30 g) containing 79 % saccharide. Mw = 259,000.
(Reissue of the entry advised in weel 9517 based on complete specification).
Dwg.0/4
FS CPI
FA AB
MC CPI: B04-C02D; B14-N12

L72 ANSWER 11 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1995-053636** [08] WPIX
DNC **C1995-024427**
TI Pharmaceutical compsn. for treating nephrotic or hepatopathy symptoms - comprises water soluble **polysaccharide** containing poly-D-**galacturonic** acid or methyl ester.
DC B04
IN ABE, H; KAJIHARA, J; KATO, K; KIRIHARA, S; YE, G J; YE, G; KAJIHARA
PA (JCRP-N) JCR PHARM CO LTD
CYC 20
PI EP 635519 A1 19950125 (199508)* EN 21 C08B037-00 <--
R: AT BE CH DE DK ES FR GB IE IT LI NL PT SE
AU 9467470 A 19950127 (199512) A61K031-70 <--
CA 2127934 A 19950116 (199516) C08B037-06 <--
FI 9403242 A 19950116 (199516) A61K000-00
ZA 9405205 A 19950329 (199519) 30 C08B000-00
US 5547945 A 19960820 (199639) 12 A61K031-715 <--
AU 686161 B 19980205 (199813) A61K031-725
EP 635519 B1 19980923 (199842) EN C08B037-00 <--
R: AT BE CH DE DK ES FR GB IE IT LI NL PT SE
DE 69413467 E 19981029 (199849) C08B037-00 <--
RU 2119341 C1 19980927 (200009) A61K035-78
ADT EP 635519 A1 EP 1994-305146 19940714; AU 9467470 A AU 1994-67470 19940714;

CA 2127934 A CA 1994-2127934 19940713; FI 9403242 A FI 1994-3242 19940707;
ZA 9405205 A ZA 1994-5205 19940715; US 5547945 A US 1994-271795 19940707;
AU 686161 B AU 1994-67470 19940714; EP 635519 B1 EP 1994-305146 19940714;
DE 69413467 E DE 1994-613467 19940714, EP 1994-305146 19940714; RU 2119341
C1 RU 1994-26096 19940714
FDT AU 686161 B Previous Publ. AU 9467470; DE 69413467 E Based on EP 635519
PRAI JP 1993-199275 19930715; JP 1994-85871
19940330
REP 01Jnl.Ref; EP 136502; JP 63090505
IC ICM A61K000-00; A61K031-70; A61K031-715; A61K031-725;
A61K035-78; C08B000-00; C08B037-00; C08B037-06
ICS A61K031-72; C07H001-00; C07H001-08; C08B037-02
AB EP 635519 A UPAB: 19950301
Pharmaceutical compsn. comprises a water-soluble **polysaccharide** having poly-D-**galacturonic** acid or methyl ester as active agent.
Also claimed is a water-soluble **polysaccharide** which can be extracted from Tanjin with water or an aqueous solvent and has the following properties. (A) Sugar content: 60 - 100 %. (1) Sugar compsn. 40 - 80 % **uronic acid** (composed almost entirely of D-**galacturonic** acid) and 10 - 30 % neutral sugars. (2) Neutral sugar compsn. 0 - 15 % **rhamnose**, 0 - 15 % **glucose**, 25 - 55 % **galactose**, 30 - 60 % **arabinose**, 0 - 15 % mannose. (B) mol. weight 150000 - 300000.
USE - The **polysaccharides** may be used to treat renal diseases including nephrotic syndrome or hepatic disorders including viral or drug-induced hepatitis. Admin. may be orally or i.m.
ADVANTAGE - The drug causes reduced side effects and can be easily administered orally or i.m.
Dwg.0/0
FS CPI
FA AB
MC CPI: B04-C02; B14-N10; B14-N12
ABEQ US 5547945 A UPAB: 19961004
A water-soluble **polysaccharide** which is extracted from Tanjin with water or an aqueous solvent and has the following characteristic properties:
A. Sugar content: 60 to 100%
(1) Sugar composition:
40 to 80% of **uronic acid** (composed almost entirely of D-**galacturonic** acid) and
10 to 30% of neutral sugars
(2) Neutral sugar composition:
0 to 15% of **rhamnose**
0 to 15% of **glucose**
25 to 55% of **galactose**
30 to 60% of **arabinose**
0 to 15% of mannose
B. Molecular weight: 150,000 to 300,000.
Dwg.0/4

L72 ANSWER 12 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 1994-272996 [34] WPIX
DNC C1994-124852
TI Novel D-**galacturonic** acid L-**rhamnose** +D-**glucose** containing **polysaccharide**(s) - useful as humectants, emulsifiers, dispersion, stabilisers, foam stabilisers, and cement additives etc.
DC A11 D13 D16 D17 D21 L02
IN MISAKI, A; NAKAGAWA, M; NAKANISHI, O; OKUMIYA, T; OOISO, Y; SUGIHARA, R
PA (TKAK) TAYCA CORP
CYC 6
PI EP 613951 A2 19940907 (199434)* EN 17 C12P019-04
R: DK FR GB SE

	JP 07090003	A 19950404 (199522)	11	C08B037-00	<--
	EP 613951	A3 19950628 (199611)		C12P019-04	
	US 5508190	A 19960416 (199621)	11	C12P019-04	
	US 5527904	A 19960618 (199630)	11	C12P019-04	

ADT EP 613951 A2 EP 1994-102795 19940224; JP 07090003 A **JP 1993-308620** 19931115; EP 613951 A3 EP 1994-102795 19940224; US 5508190 A Div ex US 1994-201698 19940225, US 1995-404642 19950315; US 5527904 A US 1994-201698 19940225

PRAI **JP 1993-64681** 19930301; **JP 1993-207046** 19930729; **JP 1993-308620** 19931115

REP 3.Jnl.Ref; JP 49086591; US 3960832

IC ICM **C08B037-00**; C12P019-04
ICS A23C009-154; A23G009-02; A23L001-035; A61K007-48; A61K047-36; B01F017-56; C04B024-10; C04B024-38; C12N001-20

ICI C12N001-20, C12R001:065; C12P019-04, C12R001:0

AB EP 613951 A UPAB: 19941013
Novel **polysaccharides** (I) have the following physicochemical props.; (a) mol.weight 5x103 to 10x106; (b) constituent glycoses alpha-D-**galacturonic** acid, beta-L-**rhamnose**, and alpha-D-**glucose**; and (c) constituent glycoses joined substantially by 1,3-linkages.

USE - (I) Have excellent H2O-retaining ability which is almost completely unaffected by the ambient relative humidity (unlike e.g. Na hyaluronate). (I) also have: film-forming properties, when they form a colourless, transparent and tough film useful for packaging and coating (in partic. a film from deacetylated (I) has excellent tensile strength and elongation at break); and dispersion-stabilising properties, useful as low-viscosity replacements for gum arabic. (I) are also useful as emulsifiers, humectants, and foam stabilisers, and in cement mixts., etc..

Dwg.0/2

FS CPI

FA AB; GI

MC CPI: A03-A; L02-C08

ABEQ US 5508190 A UPAB: 19960529
An isolated Azotobacter Beijerinkii TNM1 (FERM BP-4194) or a mutant thereof which is capable of producing **polysaccharides** having the following physicochemical properties:

(1) a molecular weight determined by gel filtration chromatography is about 5multiplied by103 to 10multiplied by106,

(2) the constituent glycoses are D-**galacturonic** acid, L-**rhamnose** and D-**glucose**,

(3) the constituent glycoses are joined substantially by 1,3-linkages, and

(4) a configuration of D-**galacturonic** acid is alpha, that of L-**rhamnose** is beta and that of D-**glucose** is alpha.

ABEQ US 5527904 A UPAB: 19960731
Polysaccharides having the following physicochemical properties: (1) a molecular weight determined by gel filtration chromatography is about 5 x 103 to 10 x 106, (2) the constituent glycoses are D-**galacturonic** acid, L-**rhamnose** and D-**glucose**, (3) the constituent glycoses are joined by 1,3-linkages, and (4) a configuration of D-**galacturonic** acid is alpha, that of L-**rhamnose** is beta and that of D-**glucose** is alpha.

Dwg.0/2

L72 ANSWER 13 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN **1994-252712** [31] WPIX

DNC **C1994-115323**

TI Anticancer compsn. - comprises viscose **polysaccharide** obtd. from Chlorella sp. K-4035.

DC B04 D16

PA (KURO-N) KURORERA KOGYO KK

CYC 1

PI JP 06183981 A 19940705 (199431)* 5 A61K031-715 <--
ADT JP 06183981 A JP 1992-343717 19921224
PRAI JP 1992-343717 19921224
IC ICM A61K031-715
ICS A61K035-80
ICA C12P019-04
ICI C12P019-04, C12R001:
AB JP 06183981 A UPAB: 19940921
Anti-cancer compsn. (I) comprises viscose **polysaccharides** (II) originated from Chlorella sp. K-4035 as ingredient. (II) comprises **rhamnose**, **arabinose**, mannose and **uronic acid** and is soluble in water but insoluble in organic solvent. Physico- chemical properties and IR spectrum of (II) are given.
(II) is prepared by procedure described in JP61096992. (I) is administered as optional preparation, orally or parenterally.
USE/ADVANTAGE - (I) is useful as anti-cancer drug, (I) does not show acute and sub-chronic toxicity to mice. Glycoprotein originated from Chlorella sp. having anti-cancer activity MW 12 x 10 power 4 and composed of a few saccharides is known already (JP61069728) but this substance is accumulated in cell, purificn. and practical scale production are quite difficult. (II) is released from cell, (II) is prepared on practical scale and purified readily.
Dwg.0/1
FS CPI
FA AB; GI
MC CPI: B04-C02; B14-H01; D05-C08

L72 ANSWER 14 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 1994-226064 [28] WPIX
DNC C1994-103651
TI New **polysaccharide** derivs. from Sedum telephium - have immunological and antiinflammatory activity, used to treat psoriasis and dermatoses and to promote wound healing.
DC B04
IN SENDL, A; VINCIERI, F F; WAGNER, H
PA (PLAN-N) PLANTAMED ARZNEIMITTEL GMBH
CYC 1
PI DE 4221753 A1 19940714 (199428)* 14 C08B037-00 <--
DE 4221753 C2 19941124 (199445) 14 C08B037-00 <--
ADT DE 4221753 A1 DE 1992-4221753 19920702
PRAI DE 1992-4221753 19920702
IC ICM C08B037-00
ICS A61K031-715
AB DE 4221753 A UPAB: 19940831
New **polysaccharides** have a basic structure of formula (I) or (II) and (a) a mol. weight of 13000 D (I) and 14000 D (II), (b) a **uronic acid** content of 55% (I) and 35% (II), (c) a protein content of 7% (I) and 4% (II), (d) an optical rotation of +140 deg. (I) and +65 deg. (II) and (e) a neutral sugar content of 5% **rhamnose**, 4% **arabinose**, 8% **galactose** and 0.5% **glucose** (I) and 11% **rhamnose**, 7% **arabinose**, 1% xylose, 6% **galactose** and 1% **glucose** (II) and (a)-(e) are average values. R1 = (a); R2 = (b); R1' = (alpha-(1-4)-alpha-GalpA)n-R3, R3 or -(1-3)-Rhap-1Rhap; and R3 = (c).
USE - The **polysaccharides**, denoted as H1AM (I) and NAS 2 (II), have immunological and antiinflammatory activity and can be used for the treatment of skin disorders such as psoriasis, dermatoses especially infectious and inflammatory dermatitides and wounds which are difficult to heal. They are pref. administered as topical or ophthalmological compsns. especially as a gel, which conveniently also contain at least one flavonoid from Sedum telephium as an additional active ingredient. The **polysaccharides** are very weak sensitisers and do not have the side

effects shown by cortisone. Further, they enable treatment to be carried out on a scale not previously possible using leaves of Sedum telephium.
Dwg.0/0

FS CPI
FA AB; DCN
MC CPI: B04-C02; B14-C03; B14-G01; B14-N17B; B14-N17C
ABEQ DE 4221753 C UPAB: 19950102
Polysaccharide has been extracted from the disintegrated leaves of tissues of Sedum telephium, and comprises a poly-glycano-galacturonan (Mr 10,000-15,000 contg. about 45-65 wt. % **galacturonic** acid units, with a mean neutral sugar content of about 5 wt. % **rhamnose**, 4 wt. % **arabinose**, 8 wt. % **galactose** and 0.5 wt. % **glucose**, and mean protein content about 7 wt %) having a mean optical rotation about +140 deg. A basic structure of the **polysaccharide** is presented.
USE/ADVANTAGE - The prod has strong immunological and antiphlogistic properties e.g. for stimulating the prodn. of tumour necrosis factor and the treatment of burns, neurodermatitis, psoriasis and eczema. The prods. are more active than the associated flavonoids and avoid the use of steroids.
Dwg.0/0

L72 ANSWER 15 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1993-304670** [39] WPIX
DNC **C1993-135575**
TI Water-soluble **polysaccharide** with low viscosity - used for stabilising protein particles under acidic conditions, comprise **rhamnose**, fucose, **arabinose**, xylose, **galactose**, **glucose** and **uronic acid**.
DC D13 D17
IN FURUTA, H; HISAKAWA, M; MAEDA, H; SATO, Y; TAKAHASHI, T; TERANISHI, S; YOSHIDA, R; FURUTZ, H
PA (FUKO) FUJI OIL CO LTD
CYC 7

PI	EP 562171	A2	19930929 (199339)*	EN	9	C08B037-14 <--
	R: DE GB					
	JP 05262802	A	19931012 (199345)		10	C08B037-14 <--
	AU 9229604	A	19930930 (199347)			C08B037-14 <--
	CN 1076700	A	19930929 (199426)			C08B037-14 <--
	EP 562171	A3	19940413 (199522)			C08B037-14 <--
	AU 669495	B	19960613 (199631)			C08B037-14 <--
	US 5710270	A	19980120 (199810)#		5	C07H001-08 <--
	JP 2882171	B2	19990412 (199920)		7	C08B037-14 <--
	EP 562171	B1	19990506 (199922)	EN		C08B037-14 <--
	R: DE GB					
	DE 69229106	E	19990610 (199929)			C08B037-14 <--
	KR 226245	B1	19991015 (200110)			C08B030-00

ADT EP 562171 A2 **EP 1992-120506 19921201**; JP 05262802 A **JP 1992-64644 19920323**; AU 9229604 A **AU 1992-29604 19921124**; CN 1076700 A **CN 1993-100003 19930101**; EP 562171 A3 **EP 1992-120506 19921201**; AU 669495 B **AU 1992-29604 19921124**; US 5710270 A Cont of US 1994-273862 19940712, US 1996-647558 19960514; JP 2882171 B2 **JP 1992-64644 19920323**; EP 562171 B1 **EP 1992-120506 19921201**; DE 69229106 E **DE 1992-629106 19921201**, **EP 1992-120506 19921201**; KR 226245 B1 **KR 1992-25236 19921223**
FDT AU 669495 B Previous Publ. AU 9229604; JP 2882171 B2 Previous Publ. JP 05262802; DE 69229106 E Based on EP 562171
PRAI **JP 1992-64644 19920323**; US 1996-647558 19960514
REP No-SR.Pub; 2.Jnl.Ref; DE 4190252; JP 03236759; JP 04018401; JP 51091342; US 4119435; US 4971810
IC ICM **C07H001-08**; C08B030-00; **C08B037-14**

ICS A23C003-08; A23C009-12; A23C009-123; A23C009-13; A23L001-052; A23L002-38; A23L003-3562; C07H001-00; C08B037-00

AB EP 562171 A UPAB: 19950721
A water-soluble **polysaccharide** comprises as constituent sugar components **rhamnose**, fucose, **arabinose**, xylose, **galactose**, **glucose** and **uronic acid** with a degree of esterification of **uronic acid** of not more than 50%.
Also claimed is a process for preparing the **polysaccharide** and an acid milk beverage containing the **polysaccharide**.
Pref. the **polysaccharide** further comprises mannose and fructose. The **polysaccharide** comprises 1-7 weight% **rhamnose**, 2-8 weight% fucose, 15-50 weight% **arabinose**, 2-10 weight% xylose, 25-60 weight% **galactose**, not more than 4 weight% **glucose** and 10-35 weight% **uronic acid**. The mol. weight of the **polysaccharide** is 50000-1000000. The degree of esterification of **uronic acid** is not more than 30 (especially 20)%. The **polysaccharide** is prepared from vegetables (especially cereals, more especially soybean).
USE/ADVANTAGE - The **polysaccharide** has low viscosity and is capable of stabilising protein particles under acidic conditions. The acid milk beverage produced using the **polysaccharide** has low viscosity and good taste.
Dwg.0/0
Dwg.0/0

FS CPI
FA AB
MC CPI: D03-B11; D06-H

ABEQ JP 05262802 A UPAB: 19931220
A water-soluble **polysaccharide** comprises as constituent sugar components **rhamnose**, fucose, **arabinose**, xylose, **galactose**, **glucose** and **uronic acid** with a degree of esterification of **uronic acid** of not more than 50%.
Preparing the **polysaccharide** and an acid milk beverage contg. the **polysaccharide** is also claimed. Pref. the **polysaccharide** further comprises mannose and fructose. The **polysaccharide** comprises 1-7 wt.% **rhamnose**, 2-8 wt.% fucose, 15-50 wt.% **arabinose**, 2-10 wt.% xylose, 25-60 wt.% **galactose**, not more than 4 wt.% **glucose** and 10-35 wt.% **uronic acid**. The mol. wt. of the **polysaccharide** is 50000-1000000. The degree of esterification of **uronic acid** is not more than 30 (esp. 20)%. The **polysaccharide** is prepd. from vegetables (esp. cereals, more esp. soybean).
USE/ADVANTAGE - The **polysaccharide** has low viscosity and is capable of stabilising protein particles under acidic conditions. The acid milk beverage produced using the **polysaccharide** has low viscosity and good taste.

ABEQ US 5710270 A UPAB: 19980309
A water-soluble **polysaccharide** comprises as constituent sugar components **rhamnose**, fucose, **arabinose**, xylose, **galactose**, **glucose** and **uronic acid** with a degree of esterification of **uronic acid** of not more than 50%.
Also claimed is a process for preparing the **polysaccharide** and an acid milk beverage contg. the **polysaccharide**.
Pref. the **polysaccharide** further comprises mannose and fructose. The **polysaccharide** comprises 1-7 wt.% **rhamnose**, 2-8 wt.% fucose, 15-50 wt.% **arabinose**, 2-10 wt.% xylose, 25-60 wt.% **galactose**, not more than 4 wt.% **glucose** and 10-35 wt.% **uronic acid**. The mol. wt. of the **polysaccharide** is 50000-1000000. The degree of esterification of **uronic acid** is not more than 30 (esp. 20)%. The

polysaccharide is prepd. from vegetables (esp. cereals, more esp. soybean).

USE/ADVANTAGE - The **polysaccharide** has low viscosity and is capable of stabilising protein particles under acidic conditions. The acid milk beverage produced using the **polysaccharide** has low viscosity and good taste.

Dwg.0/0

L72 ANSWER 16 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1993-088668** [11] WPIX
DNC **C1993-039370**
TI Water-soluble **polysaccharide**(s) of high molecular weight - consists of **rhamnose**, **arabinose**, xylose, **galactose**, **glucose** and **uronic acid**.
DC D13 D17
PA (FUKO) FUJI OIL CO LTD
CYC 1
PI JP 05032701 A 19930209 (199311)* 6 C08B037-00 <--
JP 3018622 B2 20000313 (200017) 6 C08B037-00 <--
ADT JP 05032701 A **JP 1991-216241 19910801**; JP 3018622 B2 **JP 1991-216241 19910801**
FDT JP 3018622 B2 Previous Publ. JP 05032701
PRAI **JP 1991-216241 19910801**
IC ICM **C08B037-00**
ICS A23L001-00
AB JP 05032701 A UPAB: 19930924
Water-soluble **polysaccharide** consists of saccharides, **rhamnose**, fucose, **arabinose**, xylose, **galactose** and **glucose** and contains **uronic acid**.
Water-soluble **polysaccharides** have an average molecular weight of 5-1000000 measured by limiting viscosity process, where standard pullulan is used and the viscosity is measured in 0.1M sodium nitrate solution, and have a specific rotation (25 deg.C) of at least 15.
USE/ADVANTAGE - **Polysaccharides** have high molecular weight but water-solubility, adhesivity and film forming property.
In an example, water-soluble **polysaccharides** prepared from soybeans contained 20.4 weight% of **uronic acid**, 1.6 weight% of **rhamnose**, 2.7 weight% of fucose, 19.9 weight% of **arabinose**, 6.4 weight% of xylose, 47.3 weight% of **galactose** and 1.8 weight% of **glucose**.
0/3
FS CPI
FA AB
MC CPI: D03-H01; D06-H

L72 ANSWER 17 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1992-377578** [46] WPIX
DNC **C1992-167639**
TI New **polysaccharide** A-1845 - used as raw material for drugs, foods and cosmetics and not attacked by amylase.
DC B04 D13 D16 D17 D21
PA (NIKL) JAPAN STEEL WORKS LTD
CYC 1
PI JP 04278095 A 19921002 (199246)* 6 C12P019-26 <--
JP 07093878 B2 19951011 (199545) 5 C12P019-26
ADT JP 04278095 A **JP 1991-36384 19910301**; JP 07093878 B2 **JP 1991-36384 19910301**
FDT JP 07093878 B2 Based on JP 04278095
PRAI **JP 1991-36384 19910301**
IC ICM C12P019-26
ICS **C08B037-00**; C12N001-20
ICA A23L001-30; A23L001-308
ICI C12P019-26, C12R001:465; C12N001-20, C12R001:465; C12N001-20, C12R001:465;

C12P019-26, C12R001:4

AB JP 04278095 A UPAB: 19931116
Polysaccharide A-1845 is white in colour and comprises hexose, **uronic acid**, pentose, methylpentose, aminosugars and phosphorus. The constituting sugars are mannose, **galactose**, **galacturonic** acid, xylose, **rhamnose**, **glucose**, fucose and ribose. It has clear m.pt.. The **polysaccharide** is soluble in water, insol. in MeOH, EtOH, PrOH and acetone. It gives positive results to Anthrone reaction, and negative to ninhydrin reaction. It is acidic and is not affected by amylase.

A-1845 is prepared by incubating an A-1845-producing strain of Streptomyces (specifically: Streptomyces sp. A-1845 (FERM P-12043) and isolating A-1845 from the culture broth.

USE/ADVANTAGE - A-1845 is useful as raw material for drugs, foods and cosmetics, partic. as low calorie food fibre since it is not attacked by amylase.

In an example, Str. sp. A-1845 preliminarily incubated on a starch-casein medium was incubated on 80ml medium containing 1.0% **glucose**, 3.0% corn starch, 0.5% peptone, 1.0% soybean flour, 0.5% yeast extract and 0.2% CaCO3 under reciprocal shaking at 28 deg.C for 3 days. The cultured broth (60ml) was added to 3,000ml the same medium as above and incubated under rotation (300 rpm) and aeration (2 L/min) at 28 deg.C for 6 days. The cells were removed by centrifugation and filtration. The filtrate (2200ml) was applied to ultra-filtration (limit: mol. weight 10,000), desalted, and condensed. To the condensate (625ml) was added 90ml 80% CF3COOH, and the ppte. removed by centrifugation. The supernatant (650ml) was treated with 2600ml EtOH and the ppte. dissolved in 200ml Milli-Q water and treated with 800ml EtOH. This operation was repeated once and the ppte. was dialysed in running water and Milli-Q water. The inside solution was treated with 800ml EtOH and the ppte. dried in vacuo, dissolved in 50ml ion-exchange water, and lyophilised to give 1.57g crude **polysaccharide**, which was further purified by chromatography

Dwg.0/2

FS CPI
FA AB
MC CPI: B04-C02; B12-J01; D03-H01T; D05-A02C; D06-H; D08-B

L72 ANSWER 18 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1992-006888** [01] WPIX
DNC **C1992-002954**
TI New hetero **polysaccharide** poly-54 - useful for imparting pseudo-plastic and thixotropic props to aqueous solns..
DC D16 D17
IN STIRLING, D I
PA (CELG-N) CELGENE CORP
CYC 1
PI US 5071976 A 19911210 (199201)* <--
ADT US 5071976 A US 1988-270404 19881107
PRAI US 1985-700564 19850211; US 1986-826535 19860206; US 1988-270404 19881107
IC C08B037-00; C12N001-20; C12P019-04
AB US 5071976 A UPAB: 19931006
Heteropolysaccharide (I) free of protein contains 1-3 weight% N; has as constituent monosaccharides (II) (mol ratios given) (a) **glucose** (10), (b) **galactose** (7-10), (c) mannose (1-3), and (d) a **uronic acid** (1-3) (at least 1 from **glucuronic** acid, **galacturonic** acid, **mannuronic** acid); and has ca 1 MeCO gp/4 monosaccharides. The novel (I) is called Poly 54.

By the aerobic culture of Methylophilus viscogenes (especially strain ATCC 39893) on a nutrient medium cotng. a C source (especially 0.2-0.5% v/v MeOH) at pref. 35-40 C/pH 6.7-7.1.

USE - (I) imparts pseudoplastic and thixotropic props. to aqueous solns., and shows synergistic enhancement of viscosity thickening in aqueous solns.

when used in combination with guar, locust bean or tara gums, starch, or carboxymethylcellulose.
0/2

FS CPI
FA AB
MC CPI: D05-C08; D05-H04; D06-H
ABEQ DE 3685955 G UPAB: 19931006
Heteropolysaccharide hydrophilic gum (I) composed of monosaccharides in a molar ratio comprising about 10 **glucose**, 7-10 **galactose**, 1-3 mannose and 1-3 glucronic acid and contg. 1 acetyl substituent per 3-5 monosaccharide units, and imparting pseudoplastic and thixotropic properties to aq. solns. is new.
Prodn. of an exopolysaccharide (II) comprises cultivating a methylophilus viscogenes strain aerobically in a nutrient medium contg. a growth C source. When the strain deposited as ATCC 39893 is used in a medium contg. MeOH as growth C source, then extracellular heteropolysaccharide poly 54.
Compsn
ABEQ EP 231585 B UPAB: 19931006
A heteropolysaccharide (i) which contains between 1-3 weight percent of nitrogen, (ii) which is composed of monosaccharides in a molar ratio comprising 10 **glucose**, 7-10 **galactose**, 1-3 mannose and 1-3 **uronic acid**, wherein the **uronic acid** is selected from **glucuronic** acid, **galacturonic** acid and **mannuronic** acid and (iii) which contains about one acetyl substituent per 3-5 monosaccharide units.
0/2

L72 ANSWER 19 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1991-304174** [42] WPIX
DNC **C1991-131713**
TI Use of alpha-D-**galacturonic** acid and its derivatives - for BINDING cholesterol in the treatment and prophylaxis of hyperlipidaemia, and atherosclerosis.
DC B03 B04
IN SCHAFER, H; SCHNEIDER, W; SCHAEFER, H; SCHAEFER, H L
PA (STEA) STEIGERWALD ARZNEIMITTELWERK
CYC 22
PI

DE 4011285	A	19911010 (199142)*				<--
WO 9115214	A	19911017 (199144)				<--
RW: AT BE CH DE DK ES FR GB GR IT NL SE						
W: AU CA HU SU US						
AU 9176649	A	19911030 (199205)				<--
EP 476113	A	19920325 (199213)		25		<--
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE						
ZA 9104872	A	19920429 (199222)#		17	A61K	<--
HU 61199	T	19921230 (199306)			A61K031-70	<--
JP 05500673	W	19930212 (199311)		6	A61K031-70	<--
AU 639097	B	19930715 (199335)			A61K031-70	<--
US 5434141	A	19950718 (199534)		5	A61K031-70	<--
EP 476113	B1	19960313 (199615)	GE	22	A61K031-70	<--
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE						
DE 59107536	G	19960418 (199621)			A61K031-70	<--
ES 2086538	T3	19960701 (199633)			A61K031-70	<--
RU 2108788	C1	19980420 (199847)			A61K031-725	
HU 218925	B	20001228 (200111)			A61K031-7012	

ADT DE 4011285 A **DE 1990-4011285 19900406**; EP 476113 A **EP 1991-907526 19910406**; HU 61199 T **HU 1991-3814 19910406**, WO 1991-EP654 19910406; JP 05500673 W **JP 1991-506851 19910406**, WO 1991-EP654 19910406; AU 639097 B **AU 1991-76649 19910406**; US 5434141 A **WO 1991-EP654 19910406**, US 1991-777523 19911206; EP 476113 B1 **EP 1991-907526 19910406**, WO 1991-EP654 19910406; DE 59107536 G **DE**

1991-507536 19910406, EP 1991-907526 19910406, WO 1991-EP654 19910406; ES 2086538 T3 EP 1991-907526 19910406; RU 2108788 C1 SU 1991-5010708 19910406, WO 1991-EP654 19910406; HU 218925 B HU 1991-3814 19910406, WO 1991-EP654 19910406

FDT HU 61199 T Based on WO 9115214; JP 05500673 W Based on WO 9115214; AU 639097 B Previous Publ. AU 9176649, Based on WO 9115214; US 5434141 A Based on WO 9115214; EP 476113 B1 Based on WO 9115214; DE 59107536 G Based on EP 476113, Based on WO 9115214; ES 2086538 T3 Based on EP 476113; HU 218925 B Previous Publ. HU 61199, Based on WO 9115214

PRAI DE 1990-4011285 19900406

REP 2.Jnl.Ref; DD 271415; FR 2103290; JP 54119038; JP 59206045; US 2370961

IC ICM A61K031-20; A61K031-70; A61K031-7012; A61K031-725
ICS A61K031-73; A61P003-06; A61P009-10; C07C031-07

AB DE 4011285 A UPAB: 19930928
The use of **galactouronic acids** (I) is claimed for the prophylaxis and treatment of hyperlipidaemia and/or atherosclerosis. (I) is an alpha-D-**galactouronic acid** of formula (I) with R1 = R2 = R3 = H. **Galactouronic acid** methyl esters of formula (I) with R1 = CH3 and R2 = R3 = H, and **galactouronic acid** polymers with formula (II) can also be used. R1'= CH3 or H, and R2'= R3'= H. The use of tertiary or quaternary amine anion-exchange resins containing esters of (I) or (II) is also claimed, where R1 = CH2R4, R'1 = H or R1, and R2, R3, R2' and R3' = H. The resins may also contain ethers (where R1 and R'1 = H or CH3, R2 or R3 = CH2R4, R'2 = R2 or H and R'3 = R3 or H) or acetals (where R2 and R3 together are -O-CHR4-O-. R4 = CH2N(R6)2R5; R5 = H, CH3, (CH2)mCH3 or (CH2)m-CH(OH)-CH3; R6 = (CH2)mCH3 and m = 1-5. (I) is preferably a fermented pectin.
USE/ADVANTAGE - The anion-exchange resin and the other pectin derivatives bind cholesterol in the gut, preventing its absorption. The new derivatives are substances with low toxicity, and are derived from natural water-soluble plant sugars. They themselves are water-soluble and easy to take. The daily dose is 10-50g.
0/0

FS CPI

FA AB; DCN

MC CPI: **B04-C02**; B10-A07; B12-H03

ABEQ US 5434141 A UPAB: 19950904
Prevention of hyperlipidaemia and/or atherosclerosis comprises oral admin of a **galacturonic** acid deriv. of formula (I) or a polymer of formula (II). In (I) R1-R3 are H; and in (II) R1-R3 are H and R1'-R3' are H; R1 and R1' Me and R2 and R3 and R2' and R3' are H; R1 is CH2R4 and R2 and R3 are H; R1' is R1 or H; and R2' and R3' are H; or R1 is H or Me and R2 or R3 is CH2R4; or R 2 + R3 is OCH(R4)O and R4 is CH2NR5R6R6; R5 is H, Me (CH2)mMe or (CH2)mCH(OH)Me; R6 is (CH2)mMe; m is 1-5 and n is an integer. USE/ADVANTAGE - The cpds influence lipid and cholesterol metabolism. (I) and (II) are closely related to natural constituents of the diet.
Dwg.0/0

ABEQ EP 476113 B UPAB: 19960417
Use of **galacturonic** acid, especially of alpha-D-**galacturonic** acid of the general formula (I) where R1 = H, R2 = H and R3 = H, for the preparation of a medicament for the prophylaxis and therapy of hyperlipidaemia and/or atherosclerosis.
Dwg.0/0

L72 ANSWER 20 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

AN **1991-084335** [12] WPIX

DNC **C1991-035877**

TI Candida kefyr and Candida tenius for mfg. acid **polysaccharide** - used as adsorber of cholesterol and cholesterol oxide in food.

DC B04 D13 D16

PA (SNOW) SNOW BRAND MILK PROD CO LTD

CYC 1
PI JP 03030667 A 19910208 (199112)* <--
ADT JP 03030667 A JP 1989-165077 19890627
PRAI JP 1989-165077 19890627
IC A23L001-30; C08B037-00; C12N001-16; C12P019-04; C12R001-72
AB JP 03030667 A UPAB: 19930928
New Candida kefyr generates an acid **polysaccharide** composed of **galactose** and **uronic acid.** New Candida tenuis generates an acid **polysaccharide** composed of **galactose**, **glucose**, and **uronic acid.** An acid **polysaccharide** which adsorbs cholesterol and cholesterol oxide is mfd. by culturing Candida kefyr or Candida tenuis and extracting obtd. acid **polysaccharide** from the cultured supernatant. An adsorber of cholesterol and cholesterol oxide is principally composed of an acid **polysaccharide** generated by Candida kefyr or Candida tenuis.
Candida kefyr SBT 5286 or Candida tenuis SBT 5287 is shaking-cultured in a medium composed of lactose, polypeptone, yeast extract, KH2PO4 and MgSO4.7H2O for 4 days at 37 deg.C.
USE/ADVANTAGE - The adsorber of cholesterol and cholesterol oxide is used as a food additive to remove cholesterol and cholesterol oxide from food or a reagent to separate the substances from food or a biological reagent.
0/0
FS CPI
FA AB; DCN
MC CPI: B04-B02B2; B04-C02F; B12-H03; D03-H; D05-C08

L72 ANSWER 21 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1991-030985** [05] WPIX
DNC **C1991-013232**
TI New hetero **polysaccharide** 105-4 - from new pseudomonas species, useful as thickening, suspending and stabilising agents, for well drilling fluids, paints etc..
DC A11 A97 D16 D17 D25 G02 H01
IN DASINGER, B L
PA (PFIZ) PFIZER INC; (DASI-I) DASINGER B L
CYC 8

PI	EP 410604	A	19910130 (199105)*			<--
	AU 9059745	A	19910131 (199112)			<--
	PT 94795	A	19910320 (199114)			<--
	CA 2021799	A	19910126 (199116)			<--
	JP 03074402	A	19910329 (199119)			<--
	US 5153320	A	19921006 (199243)	5	C08B037-00	<--
	EP 410604	B1	19940406 (199414) EN	13	C12P019-04	
	DE 69007892	E	19940511 (199420)		C12P019-04	
	US 5371012	A	19941206 (199503)	5	C12N001-20	
	CA 2021799	C	19941213 (199505)		C12P019-06	
	ES 2063279	T3	19950101 (199508)		C12P019-04	
	JP 07010882	B2	19950208 (199510)	6	C08B037-00	<--
	IE 63135	B	19950322 (199521)		C08B037-00	<--
	US 5532222	A	19960702 (199632)	4	A61K031-715	<--

ADT EP 410604 A **EP 1990-307576 19900711**; JP 03074402 A **JP 1990-197598 19900725**; US 5153320 A **US 1989-384939 19890725**; EP 410604 B1 **EP 1990-307576 19900711**; DE 69007892 E **DE 1990-607892 19900711, EP 1990-307576 19900711**; US 5371012 A **Cont of US 1989-384939 19890725, US 1992-944144 19920911**; CA 2021799 C **CA 1990-2021799 19900723**; ES 2063279 T3 **EP 1990-307576 19900711**; JP 07010882 B2 **JP 1990-197598 19900725**; IE 63135 B **IE 1990-2681 19900724**; US 5532222 A **Cont of US 1989-384939 19890725, Div ex US 1992-944144 19920911, US 1994-349178 19941202**
FDT DE 69007892 E Based on EP 410604; US 5371012 A Cont of US 5153320; ES 2063279 T3 Based on EP 410604; JP 07010882 B2 Based on JP 03074402; US

5532222 A Cont of US 5153320, Div ex US 5371012
PRAI **US 1989-384939** **19890725; US 1992-944144**
19920911; US 1994-349178 19941202
REP 1.Jnl.Ref; EP 138255; GB 2058106; JP 81140896; US 4247639
IC ICM **A61K031-715**; **C08B037-00**; C12N001-20; C12P019-06
ICS A23L001-05; A61K007-00; B01F017-56; **C07H001-00**; C07H003-00; C09K003-00; C12P001-04; C12R001-38
ICA C12P019-04
ICI C12P019-04, C12R001:
AB EP 410604 A UPAB: 19930928
Heteropolysaccharide 105-4 (I) is new. It contains mannose, **galactose** and **glucose** in approx mole ratio 1.3:1:3.6 and also contains (by wt) 10-25% **uronic acid** and 10-15% acetate gps.
Also new is Pseudomonas sp ATCC 53923.
Pref (I) is produced by aerobic fermentation of ATCC 53923 in an aq nutrient medium contg an assimilable C source.
USE/ADVANTAGE - (I) is used as an industrial thickener, suspending or stabilising agent for liq systems, eg liq detergents, industrial cleaners, sanitisers, fire-fighting aerosols, well-drilling and completion fluids, latex paints and personal care prods. It is effective in fresh water and in high salinity or high hardness brines and imparts pseudoplasticity.
0/0
FS CPI
FA AB
MC CPI: A03-A; A10-A; D08-A; D08-B; D11-D01B; G02-A03; H01-B06
ABEQ US 5153320 A UPAB: 19930928
Heteropolysaccharide ''105-4'' is obtd. by fermentation of a novel Pseudomonas species (ATCC 53923), and comprises mannose, **galactose** and **glucose** units (approx. 1.3/1.0/3.6), contg. **uronic acid** gps. (about 10-25 wt. %) and acetate gps. (about 10-15 wt. %).
USE - The prod. is a valuable thickening agent, suspension aid and stabiliser.
0/1
ABEQ EP 410604 B UPAB: 19940524
A heteropolysaccharide produced by a Pseudomonas species ATCC 53923, said **polysaccharide** containing mannose, **galactose** and **glucose** in the approximate molar ratio of 1.3:1:3.6, said **polysaccharide** also containing, based on the weight of the **polysaccharide**, from 10 to 25% by weight **uronic acid** and from 10 to 15% by weight acetate groups.
Dwg.0/0
ABEQ US 5371012 A UPAB: 19950126
Biologically pure culture of Pseudomonas sp. produces heteropolysaccharide 105-4 in a recoverable amt. in an aq. medium contg. assimilable sources of C, N and inorganic substances, having all the identifying characteristics of Pseudomonas strain ATCC 52923.
USE/ADVANTAGE - Polymer 105-4 is useful as a thickening, stabilising and suspending agent for detergents, industrial cleaners, sanitisers, fire fighting aerosols, well drilling and completion fluids, latex paints and personal care prods. Polymer 105-4 is extremely effective as a viscosity building agent for aq. media.
Dwg.0/1
ABEQ US 5532222 A UPAB: 19960819
A process for increasing the viscosity of an aqueous medium comprising adding in an amt. effective to increase the viscosity of the medium heteropolysaccharide 105-4, the heteropolysaccharide contg. mannose, **galactose**, and **glucose** in the approximate molar ratio of 1.3:1:3.6, the heteropolysaccharide also containing, based on the wt. of the heteropolysaccharide, from about 10 to about 25% by wt. **uronic acid** and from about 10 to about 15% by wt. acetate groups.
Dwg.0/1

L72 ANSWER 22 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 1987-286970 [41] WPIX
DNC C1987-121708
TI New hetero **polysaccharide** - has good anti-emetic effect, an average mol. weight of 750000-950000.
DC B04
PA (TAKE) TAKEDA CHEM IND LTD
CYC 1
PI JP 62198693 A 19870902 (198741)* <--
JP 06002762 B2 19940112 (199405) 6 C08B037-00 <--
ADT JP 62198693 A JP 1986-42564 19860226; JP 06002762 B2 JP 1986-42564 19860226
FDT JP 06002762 B2 Based on JP 62198693
PRAI JP 1986-42564 19860226
IC A61K031-72; C07G003-00; C08B037-00
ICM C08B037-00
ICS A61K031-72; C07G003-00
ICA A61K031-725
AB JP 62198693 A UPAB: 19930922
New branched heteropolysaccharide and it's salts have the physico-chemical properties of (a) no UV absorption, (b) no N content as constitution atom, (c) average mol.weight 750,000-950,000, (d) ca. 10 mg/ml aqueous solution, viscous
accompanied by faint sweetness, (e) (alpha)D25D-6.0 deg. (C = 1%, H2O), (f) content (weight%) of neutral saccharide; (alpha) 250 L-**arabinose** ca. 50, L-frucose ca. 7, D-**glucose** ca. 5, L-**rhamnoce** ca, 4, D-ribose ca, 2, D-**galactose** ca. 2, (g) content of **uronic acid**; ca. 1/6 weight% against total amount, calculated as **galacturonic** acid, (h) NMR (D2O), 102.8, 79.1, 77.7, 72.8, 71.4, 63.2, 22.9 ppm (principal signal), (i) acetyl group: saccharide, residual group = ca. 1:15.
To prepare the **polysaccharide** ground Pinelliae Tuber is extracted by 80 weight% methanol at 15-25 deg.C for several times, and extracted solution is centrifuged at 3,000 -4,000 r.p.m. The supernatant is dialysed to remove cpds. of m.w. less than 10,000. Then treated by Sephacryl-S-300, and the obtained fraction of average m.w. 1,000,000 is further treated by PSKG 4000 W (Toyo Soda Co). To remove protein from ave. m.w. 850,000 fraction, it is treated by warming at 60-90 deg.C and next by filtration.
USE/ADVANTAGE - It has an excellent antiemetic effect, against frogs and cats (Apomorphine test). It's antiemetic effect is 100%. Pref. daily dose for adult is 4-12 mg.
0/0
FS CPI
FA AB
MC CPI: B04-C02; B12-D05

L72 ANSWER 23 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 1987-140914 [20] WPIX
DNC C1987-058827
TI Carcinostatic agent containing **polysaccharide** lambda -spirulina - produced from Spirulina subsalsa.
DC B04
PA (TOFU) TOA NENRYO KOGYO KK
CYC 1
PI JP 62081320 A 19870414 (198720)* 6 <--
JP 05074572 B 19931018 (199344) 6 A61K031-725 <--
ADT JP 62081320 A JP 1985-218122 19851002; JP 05074572 B JP 1985-218122 19851002
FDT JP 05074572 B Based on JP 62081320
PRAI JP 1985-218122 19851002
IC A61K031-72

ICM A61K031-725
ICS A61K031-72
ICA **C08B037-00**
AB JP 62081320 A UPAB: 19930922
Carcinostatic agent contains a **polysaccharide** lambda-spirulina, which at least comprises **rhamnose**, fucose, xylose, **galactose**, **glucose**, mannose, **uronic acid** and N-acetyl **glucose** and which is produced by Spirulina Subsalsa.
USE/ADVANTAGE - The lambda-spirulina is soluble in 3M-KCl and has a stronger carcinostatic activity than a mixture of lambda-spirulina and kappa-spirulina.
In an example, sarcoma 180 (10 power 6 cells) were implanted in the abdomens of mice, and a solution of lambda-spirulina in physiological salt solution administered on 1st to 5th days and 7th to 11th days, in amount 50 mg/kg, 10 mg/kg or 2mg/kg once. The life-prolonging effect was remarkable in the administration range 50mg/kg to 10mg.kg. Toxicity is low.
0/2
FS CPI
FA AB
MC CPI: B04-C02F; B12-G07
ABEQ JP 93074572 B UPAB: 19931213
Carcinostatic agent contains a **polysaccharide** lambda-spirulinan, which at least comprises **rhamnose**, fucose, xylose, **galactose**, **glucose**, mannose, **uronic acid** and N-acetyl **glucose** and which is produced by Spirulina Subsalsa.
USE/ADVANTAGE - The lambda-spirulinan is soluble in 3M-KCl and has a stronger carcinostatic activity than a mixt. of lambda-spirulinan and kappa-spirulinan. (J62081320-A)

L72 ANSWER 24 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1986-193362** [30] WPIX
DNC **C1986-083205**
TI Viscous **polysaccharide**-containing carcinostatic - containing **polysaccharide** component of Spirulina of **rhamnose**, fucose, xylose, **galactose**, **glucose**, mannose, **uronic acid** and N-acetyl sugar.
DC B04 D16
PA (TOFU) TOA NENRYO KOGYO KK
CYC 1
PI JP 61126032 A 19860613 (198630)* 8 <--
ADT JP 61126032 A **JP 1984-245895 19841122**
PRAI **JP 1984-245895 19841122**
IC A61K035-80
AB JP 61126032 A UPAB: 19930922
Carcinostatic containing viscous **polysaccharide** component of spirulina which comprises at least **rhamnose**, fucose, xylose, **galactose**, **glucose**, mannose, **uronic acid** and N-acetyl sugar, as produced by Spirulina subsalsa.
USE/ADVANTAGE - Carcinostatic activity is strong, and this is effective especially against salcoma 180 and IMC carcinoma. Harmful side-effect is less as well as toxicity. Non-peroral administration is pref. including intra-abdominal injection, intramuscular injection, intravenous injection or per-rectal administration. Effective dose is 20 mg/kg-0.01 mg/kg a day.
0/0
FS CPI
FA AB
MC CPI: B04-C02F; B12-G07; D05-C08

L72 ANSWER 25 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1986-084802** [13] WPIX
DNC **C1986-036061**

TI New viscous **polysaccharide** - prepared from Spirulina subsalsa containing **rhamnose**, fucose, xylose, **galactose**, **glucose**, mannose, **uronic acid** and N-acetyl saccharide.
DC D16 D17
PA (SHIN-I) SHINOHARA K
CYC 1
PI JP 61031095 A 19860213 (198613)* 6 <--
JP 02019841 B 19900507 (199022) <--
ADT JP 61031095 A **JP 1984-152147 19840724**; JP 02019841 B **JP 1984-152147 19840724**
PRAI **JP 1984-152147 19840724**
IC A23L001-05; A61K037-36; **C08B037-00**; C12P019-04; C12R001-89
AB JP 61031095 A UPAB: 19930922
A viscous **polysaccharide** is produced from Spirulina subsalsa (I) containing at least **rhamnose**, fucose, xylose, **galactose**, **glucose**, mannose, **uronic acid** and N-acetyl saccharide.
USE/ADVANTAGE - New commercial viscous **polysaccharide**, Spirulina (II).
In an example, (I) is inoculated in 100 ml of a medium containing 16.0 g NaHCO3, 0.2 g MgSO4, 1.0 ml A5 solution, 0.5 g K2HPO4, 0.04 g CaCl2, 1.0 l water, 2.5 g NaNO3, 0.01 g FeSO4, 1.0 g NaCl, 0.08 g EDTA (A5 solution comprises 2.86 g H3BO3, 1.81 g MnCl2.4H2O, 0.22 g ZnSO4.7H2O, 0.08 g CuSO4.5H2O, 0.021 g Na2Mo4, 1 drop concentrate H2SO4 and 1.0 l H2O) and cultured at 37 - 40 deg.C under radiation of 4000 Lux fluorescent light with no CO2 aeration. A secretion of a viscous **polysaccharide** is confirmed in the process of cultivation. A more compact spiral filament than Spirulina ptatensis is formed. The alga is collected and heated at 90 deg.C in an aqueous solution containing 0.2% NaCl and 0.1% NaHCO3 to extract (II), and filtered. Cetyl trimethyl ammonium bromide is added to the (II) extract to 2% to ppte. (II). The ppte. is washed by 80% ethanol, 100% ethanol and then ethyl ether and dried to give 44 mg (II).
0/2
FS CPI
FA AB
MC CPI: D05-C08; D06-H

L72 ANSWER 26 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1985-039560** [07] WPIX
DNC **C1985-017050**
TI New **polysaccharide** containing **glucose**, **rhamnose** and **uronic acid** - useful for treating atherosclerosis and hyperlipidaemia.
DC B04 D16
IN KAWAI, Y; YAZAWA, K
PA (ADKA-N) ADVANCE KAIHATSU KE; (ADVA-N) ADVANCE KK; (EDVA-N) EDVANS KAIHATSU KENKUDZE KK
CYC 16
PI EP 132981 A 19850213 (198507)* EN 24 <--
R: CH DE FR GB IT LI NL SE
AU 8430488 A 19850131 (198512) <--
JP 60028401 A 19850213 (198513) <--
HU 34773 T 19850429 (198526) <--
DD 222895 A 19850529 (198538) <--
ES 8505722 A 19851001 (198603) <--
US 4687764 A 19870818 (198735) <--
CA 1239364 A 19880719 (198834) <--
EP 132981 B 19891018 (198942) EN <--
R: CH DE FR GB IT LI NL SE
DE 3480217 G 19891123 (198948) <--

JP 03065362 B 19911011 (199145) <--
SU 1732815 A3 19920507 (199318) 11 C12P019-00 <--

ADT EP 132981 A **EP 1984-304791 19840713**; JP 60028401 A **JP 1983-135982 19830727**; US 4687764 A **US 1984-632844 19840720**; JP 03065362 B **JP 1983-135982 19830727**; SU 1732815 A3 **SU 1984-3770904 19840726**

PRAI **JP 1983-135982 19830727**

REP 2.Jnl.Ref; A3...8605; EP 101209; GB 2090846; No-SR.Pub; US 4072567; US 4251519

IC A61K031-71; A61K035-74; C07G003-00; **C07H001-00**; C08B037-00; C12P001-04; C12P019-04; C12R001-46

AB EP 132981 A UPAB: 19930925
Hypotriglyceridemically active **polysaccharide** (I) having (alpha)29 + 190.1 deg. (C, 1.8; D line); molecular weight 14000+-3000 (by gel filtration); containing 70.3% **glucose**, 13.7% **rhamnose** and 16% **uronic acid**; and having neutral pH characteristics is new.
USE/ADVANTAGE - (I) is useful for treating atherosclerosis or hyperlipidaemia, and it can be safely administered to mammals as the LD50 is over 1200 mg/kg intraperitoneally in mice. (I) is also useful for treating hyperlipoproteinaemia, xanthomatosis, cholecystolithiasis, hypertension, diabetes, etc. Dose is 1 microgram - 0.5 g/kg.
0/4

FS CPI

FA AB

MC CPI: **B04-C02**; B12-F05; B12-G02; B12-H03; B12-H05; D05-C08

ABEQ EP 132981 B UPAB: 19930925
A hypotriglyceridemically active **polysaccharide** having the following characteristics: (a) specific rotatory power: (alpha)D29 = + 190.1 (1.8 w/v% soln), (b) molecular wt. by gel filtration: 14,000 +/- 3,000, (c) sugar compsn. (wt. percent by gas chromatography): **glucose** 70.3: **rhamnose** 13.7; **uronic acid** 16.0; (d) acid-base characteristics: neutral **polysaccharides**, (e) physiological characteristics: capable of reducing the blood triglyceride in mammals, (f) chemical nature and solubilising properties: a non-deliquescent white powder, high soluble in water, but only partly soluble in ethanol, methanol and acetone, and insoluble in ether and chloroform. (g) infrared absorption spectrum; as shown in Fig. 1, (h) elementary analysis: C: 37.2%, H: 6.4%, O: 56.4%, (i) melting point: 235-241 deg C.

ABEQ US 4687764 A UPAB: 19930925
New **polysaccharide** (I) is characterised by: a) specific rotatory power (alphaD29=+190.) (1.8 W/V% soln.); b) mol. wt. by gel filtration : 14-000(+/-)3000; c) sugar compsn. (wt.% by gas chromatography): **glucose** 70.3, **rhamnose** 13.07, usonic acid 16.0; d) acid-base characteristics: neutral **polysaccharides**; e) physcological characteristics: capable of reducing the blood triglyceride in mammals. Pref. the hypotriglyceridemically active **polysaccharide** is derived from a microorganisms of the genus Streptococcus.
USE - (I) is useful for reducing the blood triglyceride in mammals.

ABEQ SU 1732815 A UPAB: 19931112
Hypotriglyceridemically active **polysaccharide** (I) having (alpha)29 + 190.1 deg. (C, 1.8; D line); molecular wt. 14000+-3000 (by gel filtration); contg. 70.3% **glucose**, 13.7% **rhamnose** and 16% **uronic acid**; and having neutral pH characteristics is new.
USE/ADVANTAGE - (I) is useful for treating atherosclerosis or hyperlipidaemia, and it can be safely administered to mammals as the LD50 is over 1200 mg/kg intraperitoneally in mice. (I) is also useful for treating hyperlipoproteinaemia, xanthomatosis, cholecystolithiasis, hypertension, diabetes, etc. Dose is 1 microgram -0.5g/kg. Bul.17/7.5.92
4/4 Unsuitable dwgs.

L72 ANSWER 27 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 1984-052642 [09] WPIX
DNC C1984-022216
TI **Polysaccharide** from Coix Ma-yuen roman - useful for treatment of hyperlipaemia and arteriosclerosis.
DC B04
PA (SNOW) SNOW BRAND MILK PROD CO LTD
CYC 1
PI JP 59011302 A 19840120 (198409)* 5 <--
JP 03063561 B 19911001 (199143) <--
ADT JP 59011302 A **JP 1982-120819 19820712**; JP 03063561 B **JP 1982-120819 19820712**
PRAI **JP 1982-120819 19820712**
IC A61K031-71; A61K035-78; C08B037-00
AB JP 59011302 A UPAB: 19930925
The **polysaccharide** has the following physicochemical properties: (a) average mol.weight: about 500,000, (b) sugar components: xylose (36.4 w/w%), **arabinose** (34.4 w/w%), **glucose** 17.6 w/w%), **uronic acid** (7.4 w/w%), **galactose** (4.1 w/w%), mannose (trace), (c) specific optical rotation: (alpha)24D-97.5 deg., (d) IR absorption spectrum: 900, 1650 cm. power (-1), (e) solubility: soluble in water and alkaline solution; insoluble in acetone, benzene, alcohol, aqueous alcohol and chloroform, (f) colour reaction: positive to aniline-phthalic acid, ammonia-silver nitrate, and ninhydrin, (g) nature: neutral, and (h) appearance: white or pale brown powder, tasteless and odourless.

The compsn. can be administered orally in the form of tablets, powders, granules or solns. at daily dose of 50-100 mg/kg. The **polysaccharide** can be obtd. by extracting bran of Coix Ma-yeun Roman. The bran is treated with an organic solvent (e.g. n-hexane) to give a skimmed bran. Then, the skimmed bran is treated with an enzyme (e.g. glycoamylase) and filtered. The residue is dissolved in 0.5 N alkali solution and neutralised. After removal of the precipitated protein by centrifuge, the supernatant is dialysed and the desired **polysaccharide** is precipitated upon addition of ethanol.

0/0
FS CPI
FA AB
MC CPI: B04-C02; B12-H03

L72 ANSWER 28 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 1982-013260 [36] WPIX
TI D-Galacto-pyran-**uronic**, di **galacto-uronic** - and tri **galacto-uronic acids** preparation.
DC D16 E13
PA (REXO-I) REXOVA-BENKOVA L
CYC 1
PI CS 8106576 A 19820528 (198236)* <--
PRAI **CS 1981-6576 19810907**
IC C12P019-00
FS CPI
FA NOAB

L72 ANSWER 29 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 1980-11020C [06] WPIX
TI Hetero-**polysaccharide**-10 used as thickener in aqueous compsns. - contains three weight per cent protein and carbohydrate containing **uronic acid, glucose, galactose** and fucose.
DC A11 A87 A97 C03 D13 F06
IN KANG, K S; RICHEY, D D; VEEDER, G T
PA (MERI) MERCK & CO INC
CYC 1
PI US 4186025 A 19800129 (198006)* <--

PRAI **US 1971-197941** **19711104; US 1973-373724**
19730626; US 1975-616733 **19750925;**
US 1977-768517 **19770214; US 1977-864298**
19771227
IC C08L005-00; C09J003-02
AB US 4186025 A UPAB: 19930902
Compsn. comprises an aqueous medium containing as thickening agent about 0.3-3.0
weight% of heteropolysaccharide -10 which contains about 3% protein and 97% carbohydrate. The carbohydrate is made up of about 19% of a **uronic acid**, about 39% **glucose**, about 29% **galactose** and about 13% fucose.
Heteropolysaccharide-10 may be used as an additive to textile printing astes in formulating low drift aqueous herbicidal compsns., in thickening salad dressings, in forming thickened puddings and as a thickener in adhesives. It is also partic. useful as an additive to aqueous paints and can also be used as a fluid loss control agent in drilling muds, completion fluids and similar aqueous media from which fluid losses to subterranean strata have to be controlled.
FS CPI
FA AB
MC CPI: A03-A; A12-W12; C04-C02; D03-H01J; F03-G

L72 ANSWER 30 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1980-013747** [32] WPIX
TI **D-galactouronic acid** preparation.
DC E13
PA (ONDR-I) ONDREJKOVIC A
CYC 1
PI CS 7901513 A 19800530 (198032)* <--
PRAI **CS 1979-1513** **19790307**
IC C07C059-10
FS CPI
FA NOAB

L72 ANSWER 31 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1977-005609** [47] WPIX
TI **Galacto-pyranosyl-uronic acid** (D)-**galactose** preparation.
DC B03
PA (TOMA-I) TOMAN R
CYC 1
PI CS 7508749 A 19770831 (197747)* <--
PRAI **CS 1975-8749** **19751222**
IC C07H007-02
FS CPI
FA NOAB

L72 ANSWER 32 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1974-31483V** [17] WPIX
TI Sugar based viscous substance prodn - from achromobacter mucosum constg of **glucose**, **galactose**, mannose and **uronic acid**.
DC D16
PA (AGEN) AGENCY OF IND SCI & TECHNOLOGY; (INDU-N) IND & ENG BUREAU
CYC 1
PI JP 48099394 A 19731215 (197417)* <--
JP 51044198 B 19761126 (197652) <--
PRAI **JP 1972-33756** **19720404**
IC C08B037-00; C12D013-04
AB JP 48099394 A UPAB: 19930831
A viscous substance was produced by a new isolate identified as Achromobacter mucosum (I, FERM-P 880) cultured in a medium containing sugars,

N source, minerals, and vitamins. The viscous substance was insol. in Me2CO, MeOH, EtOH, and iso-PrOH and consisted of **glucose**, **galactose**, mannose, and **uronic acid**.
Viscosity of the substance was 1.200 and 3.600 c.p. in 1.0 and 1.5% solution at 30 degrees.
FS CPI
FA AB
MC CPI: D05-C; D05-H04

L72 ANSWER 33 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1966-25420F** [00] WPIX
TI Carraglucan **polysaccharide**.
DC B00
PA (PARK) PARKE DAVIS & CO
CYC 1
PI US 3305543 A (196800)*
PRAI **US 1965-483623 19650830**
AB US 3305543 A UPAB: 19930831
A **polysaccharide**, Carraglucan (I) and process for its preparation
in free acid and salt forms.
(I) is heat stable, water-soluble and non-dialysable. Hydrolysis gives D and L-**galactose**, D-**glucose**, xylose, **uronic**
acid and a reducing substance. It gives positive anthrone, phloroglucinol and carbazole tests and negative sialic acid and alkanoic acid ester tests.
Anti-infective agent. Enhances host resistance to infection with any variety of bacteria. Shows no significant antibacterial effect in vitro and no immediate effect in vivo but produces an anti-infective response within a few days.
Mice are given a single subcutaneous dose of (I) in water and after 4 days are challenged with 10-15 LD50 of Klebsiella pneumoniae intraperitoneally. Survivors are counted after 7-10 days from the challenge and the PD50 calculated.
FS CPI
FA AB
MC CPI: **B04-C02**; B12-A01

L72 ANSWER 34 OF 34 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN **1966-18653F** [00] WPIX
TI Antitumour agent.
DC B00
PA (KAKE) KAKEN KAGAKU KK
CYC 1
PI JP 40022398 B (196800)*
PRAI **JP 1962-25449 19620621**
AB JP 65022398 B UPAB: 19930831
Antitumour agent (I) isolated from aqueous extracts of bamboo spp. (I), a high M.W. cpd. of unknown structure, contains ca. 65% total sugars, 2% N, and ca. 3% ash.(I) gives +ve Molisch, Bial's, Du Bois', anthrone, and ornithine reactions, and -ve Fehling's, biuret, Millon's, Xanthoproteic, and Adamkiewitz reactions. The ninhydrin reaction is weakly -ve.
Hydrolysis of (I) with N-H2SO4 (22 hr. at 100 deg.) affords **arabinose**, xylose, **galactose**, and small amounts of **uronic acids**
but no hexosamines or ninhydrin +ve cpds.
(I) is non-toxic antitumour agent, with no cytotoxicity. (I) is effective by injection against various solid carcinomas (e.g. Ehrlich's carcinoma), causing complete regression.
FS CPI
FA AB

MC CPI: B04-A07F; B12-G07

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FILE LAST UPDATED: 17 Jan 2005 (20050117/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L91 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:595506 HCAPLUS
DN 137:125358
ED Entered STN: 09 Aug 2002
TI Preparation of modified uronic acid-containing polysaccharides for treatment of cancer
IN Platt, David
PA USA
SO U.S. Pat. Appl. Publ., 14 pp., Cont.-in-part of U. S. Ser. No. 24,487.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K031-715
ICS C08B037-00
NCL 514054000
CC 33-8 (Carbohydrates)
Section cross-reference(s): 1, 63

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2002107222	A1	20020808	US 2002-41350	20020108 <--
PRAI US 1993-24487	A2	19930301 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2002107222	ICM	A61K031-715
	ICS	C08B037-00
	NCL	514054000
US 2002107222	ECLA	C08B037/00 <--

AB Modified polysaccharide compns. and their use for treating subjects with cancer, preventing cancer in high-risk subjects and inhibiting metastasis in a subject (no data), are described. The modified polysaccharide includes a saccharide backbone being less than 5% esterified and containing repeating units, wherein each repeating unit has a plurality of uronic acid mols., each repeating unit having at least one neutral

monosaccharide attached thereto, at least one side chain of saccharides attached to the backbone further comprising a plurality of neutral saccharides or saccharide derivs.; and having an average mol. weight in the range of 15 to 60 kD.

ST uronic acid polysaccharide prepn antitumor cell adhesion cancer treatment

IT Sarcoma
(Kaposi's; preparation of modified uronic acid-containing polysaccharides for
treatment of cancer)

IT Mammary gland, neoplasm
(adenocarcinoma; preparation of modified uronic acid-containing polysaccharides
for treatment of cancer)

IT Fetuins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(asialofetuins; preparation of modified uronic acid-containing polysaccharides
for treatment of cancer)

IT Sialoglycoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(asialoglycoproteins; preparation of modified uronic acid-containing
polysaccharides for treatment of cancer)

IT Ovary, neoplasm
(carcinoma; preparation of modified uronic acid-containing polysaccharides for
treatment of cancer)

IT Leukemia
(chronic; preparation of modified uronic acid-containing polysaccharides for
treatment of cancer)

IT Intestine
Intestine, neoplasm
(colon; preparation of modified uronic acid-containing polysaccharides for
treatment of cancer)

IT Intestine, neoplasm
(colorectal; preparation of modified uronic acid-containing polysaccharides for
treatment of cancer)

IT Agglutinins and Lectins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(galectin-3; preparation of modified uronic acid-containing polysaccharides for
treatment of cancer)

IT Leukemia
Sarcoma
(inhibitors; preparation of modified uronic acid-containing polysaccharides for
treatment of cancer)

IT Neoplasm
(metastasis; preparation of modified uronic acid-containing polysaccharides for
treatment of cancer)

IT Adhesion, biological
Antitumor agents
Bladder, neoplasm
Kidney, neoplasm
Lung
Lung, neoplasm
Mammary gland, neoplasm
Melanoma
Pharynx, neoplasm
Prostate gland
Stomach
Stomach, neoplasm

(preparation of modified uronic acid-containing polysaccharides for treatment of cancer)

IT Laminins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of modified uronic acid-containing polysaccharides for treatment of cancer)

IT **Polysaccharides, preparation**
Uronic acids
RL: BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of modified uronic acid-containing polysaccharides for treatment of cancer)

IT Carcinoma
(squamous cell, pharyngeal; preparation of modified uronic acid-containing polysaccharides for treatment of cancer)

IT Lung
(toxicity; preparation of modified uronic acid-containing polysaccharides for treatment of cancer)

L91 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
AN **1989:56270** HCAPLUS
DN **110:56270**
ED Entered STN: 17 Feb 1989
TI New structural data on pectic substances from grape pulp
AU Saulnier, L.; Brillouet, J. M.; Moutounet, M.
CS Lab. Polym. Tech. Phys. Chim., Inst. Prod. Vigne, Montpellier, 34060, Fr.
SO Connaissance de la Vigne et du Vin (1988), 22(2), 135-58
CODEN: CVVIDV; ISSN: 0010-597X
DT Journal
LA French
CC 17-10 (Food and Feed Chemistry)
AB Plant pectic polysaccharides are discussed and structural data on pectic substances from grape pulp and related anal. techniques are reported. An alc. insol. residue (MIA) was prepared from grape pulp, which was sequentially extracted with water (25°), oxalate (25°), acid (0.05N HCl, 80°) and NaOH (0.05N, 4°), yielding 4 pectic fractions, resp., PSE, PSOX, PSH, and PSOH. PSE (35%) and PSH (55%) represented the main part of extracted pectic material. PSE was fractionated by ion-exchange chromatog. into **neutral** (PSEn .apprx.13) and acidic (PSEa .apprx.87%) fractions. PSEa and PSH were mainly galacturonic acid (PSEa 63, PSH 53%) highly Me esterified (esterification degree: PSEa 77, PSH 68%), whereas PSEn contained minute amts. of **glucuronic** acid (2%). **Neutral** sugars (PSEn 65, PSEa 28, PSH 19%) were mainly **arabinose** and **galactose** followed by decreasing amts. of **rhamnose**, xylose, **glucose**, mannose, and fucose. Proteins were also detected along with the polysaccharides. Degradation of PSEa and PSH by endopolygalacturonase and endopectinlyase evidenced smooth homogalacturonic areas sensitive to enzymic degradation and hairy **rhamnogalacturonic** zones highly substituted by **neutral** sugar side-**chains** and resistant to enzyme action. Treatment of MIA with endopectinlyase released pectic material (ZH-MIA) rich in **neutral** sugars (56%), especially **arabinose**, and containing galacturonic acid (23) and proteins (11%). Structure of **neutral** sugar side-**chains** was investigated using methylation anal. associated with specific hydrolysis of **arabinose** residues with an α-L- **arabinofuranosidase**, and 13C NMR spectroscopy. ZH-PSE exhibited a structure of 3,6-linked **arabinogalactan** substituted by monomeric terminal

arabinose. Similar structures were detected in PSEn which relates them to **arabino**-3,6-galactan-proteins. Conversely PSH or ZH-MIA showed mainly arabinan-like and **rhamnogalacturonan** structures associated with minor proportions of 3,6- and 4-linked **arabinogalactans**.

ST grape pulp pectic polysaccharide

IT Pectic substances
Polysaccharides, biological studies
RL: BIOL (Biological study)
(of grape pulp, composition and structure of)

IT Proteins, biological studies
Uronic acids
RL: BIOL (Biological study)
(of pectic substances, of grape pulp)

IT Amino acids, biological studies
RL: BIOL (Biological study)
(of proteins associated with grape pulp pectic substances)

IT Grape
(pulp, pectic polysaccharides of, composition and structure of)

IT 50-99-7, **Glucose**, biological studies 58-86-6, Xylose, biological studies 59-23-4, **Galactose**, biological studies 67-56-1, Methanol, biological studies 67-56-1D, Methanol, esters 147-81-9, **Arabinose** 685-73-4, Galacturonic acid 2438-80-4, Fucose 3458-28-4, Mannose 3615-41-6, **Rhamnose**
RL: BIOL (Biological study)
(of pectic substances, of grape pulp)

L91 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
AN **1987:474545** HCAPLUS
DN **107:74545**
ED Entered STN: 05 Sep 1987
TI Structural characterization of a tobacco **rhamnogalacturonan**
AU Sun, H. H.; Wooten, J. B.; Ryan, W. S., Jr.; Bokelman, G. H.; Aman, P.
CS Res. Cent., Philip Morris USA, Richmond, VA, 23261, USA
SO Carbohydrate Polymers (1987), 7(2), 143-58
CODEN: CAPOD8; ISSN: 0144-8617
DT Journal
LA English
CC 11-7 (Plant Biochemistry)
Section cross-reference(s): 33

AB A **rhamnogalacturonan**, extracted with hot water from the aqueous ethanol insol. residue of flue-cured bright tobacco lamina, was purified by tangential flow ultrafiltration, ion chromatog., and gel filtration. It was characterized by chemical and spectroscopic methods. Fractionation revealed that the **rhamnogalacturonan** consisted of a series of polysaccharides with different amts. of methyl-esterified **galactopyranosyluronic** acid residues in the backbone and different amts. of **neutral** sugar residues. The main pectic polysaccharide fraction has a backbone consisting of 4-linked α-D-**galactopyranosyluronic** acid residues interspersed with 2-linked L-**rhamnopyranosyl** residues. Approx. 22% of the **galactopyranosyluronic** acid residues are methylated. The main **chain** is branched at C-4 of **rhamnose** with **neutral** sugar side **chains** containing terminal and 4-linked β-D- **galactopyranosyl** and terminal and 5-linked α-L-**arabinofuranosyl** residues. The average d.p. of this tobacco **rhamnogalacturonan** was estimated to be 400.

ST tobacco **rhamnogalacturonan**

IT Pectic substances
RL: BIOL (Biological study)
(from flue-cured tobacco lamina, isolation and structure of)

IT **Polysaccharides, biological studies**
RL: BIOL (Biological study)

(from tobacco, structure of)

IT Tobacco
(**rhamnogalacturonan** of, structure of)

IT Tobacco
(flue-cured, **rhamnogalacturonan** from)

IT 39280-21-2, **Rhamnogalacturonan**
RL: BIOL (Biological study)
(from tobacco, structure of)

IT 9000-69-5, Pectin
RL: BIOL (Biological study)
(of tobacco, polysaccharide composition of)

IT 50-99-7, D-**Glucose**, biological studies 59-23-4, D-**Galactose**, biological studies 685-73-4, D-Galacturonic acid 3615-41-6, L-**Rhamnose** 5328-37-0, L-**Arabinose**
RL: BIOL (Biological study)
(**rhamnogalacturonan** containing, from tobacco)

IT 58-86-6, Xylose, biological studies
RL: BIOL (Biological study)
(tobacco pectin containing)

L91 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
AN **1986:618429** HCAPLUS
DN **105:218429**
ED Entered STN: 26 Dec 1986
TI Antitumor polysaccharides from Solidago species
AU Kraus, Josef; Schneider, Martin; Franz, Gerhard
CS Pharm. Biol., Univ. Regensburg, Regensburg, 8400, Fed. Rep. Ger.
SO Deutsche Apotheker Zeitung (**1986**), 126(38), 2045-9
CODEN: DAZEA2; ISSN: 0011-9857
DT Journal
LA German
CC 1-6 (Pharmacology)
Section cross-reference(s): 11
AB The isolation and characterization and antitumor testing of water-soluble polysaccharides of Solidago sp. are presented. Fractionation of the crude polysaccharide fraction yielded a **neutral** (F1) and an acid (F2) fractions. The F1 fraction consisted of a β-1,2-fructosan [92880-82-5] with a **chain** length of 15-20 fructose units. The acid fraction was separated into 3 subfractions which after hydrolytic cleavage yielded the main sugar building blocks L-**rhamnose** [3615-41-6], L-**arabinose** [5328-37-0], D-**galactose** [59-23-4], and uronic acid. Following the administration of F1 or F2 fractions to sarcoma-bearing mice, tumor inhibition was 82 and 72%, resp., and tumor regression was 67 and 33%, resp.
ST polysaccharide characterization Solidago antitumor
IT Goldenrod
(extract, polysaccharides of, characterization and antitumor activity of)
IT **Polysaccharides, biological studies**
Uronic acids
RL: BIOL (Biological study)
(of Solidago extract, antitumor activity from)
IT Neoplasm inhibitors
(polysaccharides of Solidago extract as)
IT 59-23-4, biological studies 3615-41-6 5328-37-0 92880-82-5
RL: BIOL (Biological study)
(of Solidago extract, antitumor activity from)

L91 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
AN **1982:469318** HCAPLUS
DN **97:69318**
ED Entered STN: 12 May 1984
TI Polygonatum polysaccharides. V. Isolation and characterization of **glucomannans** from Polygonatum polyanthemum

AU Rakhmanberdyeva, R. K.; Rakhimov, D. A.; Kondratenko, E. S.
CS Inst. Khim. Rast. Veshchestv, Tashkent, USSR
SO Khimiya Prirodnykh Soedinenii (1982), (3), 393-4
CODEN: KPSUAR; ISSN: 0023-1150
DT Journal
LA Russian
CC 11-1 (Plant Biochemistry)
AB Polysaccharides were extracted from P. polyanthemum according to R. K. Rakhmanberdyeva et al. (1979) and hydrolyzed with 2N H2SO4 at 100° for 8 h. The leaves, stem, rhizome, and roots contained uronic acid and varying proportions of **rhamnose**, **arabinose**, xylose, **glucose**, and **galactose**. **Galactose** prevailed in the aerial parts, whereas mannose prevailed in the roots and rhizomes. The polysaccharide content was highest in the rhizome. The rhizome polysaccharides were purified by chromatog. on an EAE-cellulose column. The water-elutable **neutral** polysaccharide made up 45% of the original **neutral** polysaccharide and contained 20% **glucomannan**. The remaining 76% portion of the water-eluted **neutral** polysacchhdide consisted of 4 fractions: B1 (25.0%), B2 (43.0%), B3 (6.5%), and B4 (5.0%). The hydrolyzate of B1 contained **arabinose**, xylose, mannose, and **galactose**, and traces of **rhamnose** and **glucose**. The hydrolyzates of B2 and B3 contained **glucose** and mannose in 1:10.2 and 1:6.6 ratios, resp. **Glucomannan** B2 had a β-glycoside bond. Hydrolysis of permethylate of **glucomannan** B2 showed 2,3,6-tri-O-methyl-D-**glucose**, 2,3,6-tri-O-methyl-D-mannose (1:10.2), and traces of 2,3,4,6-tetra-O-methyl-D-mannose. Methylation, Cr oxidation, and IR spectroscopy showed that **glucomannan** B2 has a linear **chain** with a β-(1→4)-bond.
ST Polygonatum organ **glucomannan**; polysaccharide Polygonatum; sugar Polygonatum polysaccharide
IT **Uronic acids**
RL: BIOL (Biological study)
(from Polygonatum polyanthemum)
IT **Polysaccharides, biological studies**
RL: BIOL (Biological study)
(from Polygonatum polyanthemum, characterization of)
IT Polygonatum polyanthemum
(**glucomannans** from, characterization of)
IT 50-99-7, biological studies 58-86-6, biological studies 59-23-4, biological studies 147-81-9 3458-28-4 3615-41-6 4234-44-0 5856-21-3 15075-09-9
RL: BIOL (Biological study)
(polysaccharides containing, from Polygonatum polyanthemum)

L91 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
AN **1975:528505** HCAPLUS
DN **83:128505**
ED Entered STN: 12 May 1984
TI Fragmentation analysis of extracellular acid polysaccharides from seven Rhizobium strains. I. D-**Glucuronic** acid-containing oligosaccharides
AU Soemme, Randi
CS Dep. Chem., Agric. Univ. Norway, Aas, Norway
SO Carbohydrate Research (1975), 43(1), 145-9
CODEN: CRBRAT; ISSN: 0008-6215
DT Journal
LA English
CC 10-1 (Microbial Biochemistry)
AB The extracellular, bacterial polysaccharides from 7 Rhizobium strains have been submitted to partial hydrolysis with acid. Several **neutral** oligosaccharides, some containing pyruvic acid, were isolated together with D-**glucuronic** acid-containing oligosaccharides. The polysaccharide from

R. meliloti did not contain **glucuronic** acid. For the other 6 strains, the following components were characterized: 4-O-(β-D-**glucopyranosyluronic** acid)-D-**glucuronic** acid, 4-O-(β-D- **glucopyranosyluronic** acid)-D-**glucose**, and O-(β-D- **glucopyranosyluronic** acid)-(1→4)-O-(β-D- **glucopyranosyluronic** acid)-(1→4)-D-**glucose**. These results indicate the presence of **chains** containing 2 β-(1→4)-linked D- **glucuronic** acid residues, β-linked to D- **glucose** at position 4.

ST Rhizobium polysaccharide

IT **Polysaccharides, biological studies**
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(of Rhizobium)

IT Rhizobium
(polysaccharides of)

IT 5551-59-7 6556-12-3 56578-23-5 56648-82-9
RL: BIOL (Biological study)
(of Rhizobium polysaccharides)

L91 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
AN **1962:53658** HCAPLUS
DN **56:53658**
OREF 56:10255e-i,10256a-b
ED Entered STN: 22 Apr 2001
TI Structure of the gum asafetida polysaccharide
AU Jones, J. K. N.; Thomas, G. H. S.
CS Queen's Univ., Kingston
SO Canadian Journal of Chemistry (1961), 39, 192-202
CODEN: CJCHAG; ISSN: 0008-4042
DT Journal
LA Unavailable
CC 37 (Carbohydrates)
AB cf. CA 50, 8472b. -The oleogum resin of asafetida was extracted with hot methanol. A polysaccharide (I) (equivalent weight 1500, [α]D -48° ± 2°) was precipitated when the extract was added to acidified EtOH. I could not be fractionated by alc. precipitation or the use of Cetavlon. The gum acetate of I could not be fractionated. Acidic hydrolysis of I yielded D-**galactose**, L-**arabinose**, L-**rhamnose**, and D-**glucuronic** acid and its 4-O-Me derivative (5:3:trace:1). I treated with acid yielded small amts. of 6-O-β-D- **galactopyranosyl**-D-**galactose** (II) and 3-O-β-D- **galactopyranosyl**-D-**galactose** (III), and larger amts. of 6-O-(β-D-**glucopyranosyluronic** acid)-D-**galactose** (IV), and 6-O-(4-O-methyl-β-D- **glucopyranosyluronic** acid)-D-**galactose** (V). II and III were not obtained in their crystalline form, were **neutral**, yielded only D-**galactose** on hydrolysis, and were tentatively identified by their rates of movement on chromatograms and by the infrared absorption spectra of their acetates. IV and V gave D-**galactose** on hydrolysis. V moved faster on the chromatogram and yielded 4-O-methyl-D-**glucuronic** acid which was characterized as the amide of Me 4-O-methyl-α-D-**glucuronoside**. IV yielded D-**glucuronic** acid on hydrolysis. After methylation, reduction with $LiAlH_4$, further methylation and hydrolysis, IV and V gave 2,3,4,6-tetra-O-methyl-D-**glucose** and 2,3,4-tri-O-methyl-D-**galactose**. Autohydrolysis of an aqueous solution of I yielded L-**arabinose**, L-**rhamnose**, traces of D-**galactose**, oligosaccharides, and a degraded gum (VI) which contained D-**galactose**, D-**glucuronic** acid, its 4-O-methyl derivs., and L-**arabinose**. Methylation of I and VI yielded 2,3,5-tri-O-methyl-L-**arabinose**, 2,3,4,6-tetra-, 2,4,6-tri-, 2,4-di-, and 2-O-methyl-D-**galactose** and

2,3,4-tri-O-methyl-D-**glucuronic** acid, which indicated a branched **chain** structure. An L-**rhamnose** derivative and possibly an L-**arabinose** derivative remain to be identified in the products of the hydrolysis of the undegraded gum. In the methylated I the approx. mol. proportions of the sugars were: 2,3,5-tri-O-methyl-L-**arabinose** plus 2,3,4,6-tetra-O-methyl-D-**galactose** (end groups) (3 + trace parts); dimethyl-L-**arabinose** (small); 2,4,6-tri(2 parts), 2,4-di- (2 parts), and 2-mono-O-methyl-D-**galactose** (1 part); and 2,3,4-tri-O-methyl-D-**glucuronic** acid (1 part). Methylated VI yielded: 2,3,5-tri-O-methyl-L-**arabinose**; 2,3,4,6-tetra-O-methyl-, 2,4,6-tri-O-methyl-, 2,4-di-O-methyl-D-**galactose**; and 2,3,4-tri-O-methyl-D-**glucuronic** acid (1:2:9:6:5). I oxidized with Na metaperiodate yielded 0.11 mole HCO2H and consumed 0.65 mole of metaperiodate per sugar residue in 30 hrs. VI consumed 0.83 mole periodate and produced 0.26 mole HCO2H, but these figures do not agree with the methylation results. Periodate oxidation of I and VI followed by reduction with NaBH4 and degradation by cold dilute acid, indicated that the polysaccharide consisted of a main **chain** of D-**galactopyranose** residues, which were probably largely 1,3-β-linked. D- **Galactopyranose**, L-**arabinofuranose**, and possibly L-**arabinopyranose** were connected to the main **chain** and had residues of D-**glucuronic** acid, its 4-Me ether, L-**rhamnose**, and D-**galactose** (all in the pyranose form) attached.

IT Gums
(asafetida, polysaccharide from)

IT **Polysaccharides**
(from asafetida gum)

IT Asafetida
(polysaccharide of gum from)

IT 4120-73-4, **Glucuronic** acid, 4-O-methyl-, D-
(from asafetida gum polysaccharide)

IT 147-81-9, **Arabinose**
(from asafetida polysaccharidi gum)

IT 59-23-4, **Galactose** 5077-31-6, **Galactose**, 6-O-β-D- **galactopyranosyl**-, D- 5188-48-7, **Galactose**, 3-O-β-D- **galactopyranosyl**-, D- 7264-19-9, **Galactose**, 6-O-β-D- **glucopyranuronosyl**-, D- 13006-41-2, **Galactose**, 6-O-(4-O-methyl-β-D-**glucopyranuronosyl**)-, D-
(from gum asafetida polysaccharide)

IT 3615-41-6, **Rhamnose**
(in gum asafetida polysaccharide)

IT **6556-12-3**, **Glucuronic** acid
(in polysaccharide, of gum asafetida)

L91 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
AN **1959:25899** HCAPLUS
DN **53:25899**
OREF 53:4728g-i,4729a-i,4730a-g
ED Entered STN: 22 Apr 2001
TI The hemicelluloses of Western red cedar: the constitution of a **glucomannan**
AU Hamilton, J. Kelvin; Partlow, E. Vernon
CS Rayonier, Inc., Shelton, WA
SO Journal of the American Chemical Society (1958), 80, 4880-5
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA Unavailable
CC 23 (Cellulose, Lignin, Paper, and Other Wood Products)
AB Shavings from green western red cedar extracted 24 hrs. with Me2CO, and the estimate filtered and evaporated gave 3.1% reddish-brown sirup. A portion of the

Me2CO extract chromatographed on paper showed the presence of **arabinose** (I). A portion of the Me2CO extract hydrolyzed 12 hrs. with N H2SO4, **neutralized** with BaCO3, filtered, deionized with Amberlite IR-120, and evaporated gave a sirup; a sample chromatographed on paper showed the presence of I, **glucose** (II), xylose (III), and **rhamnose** (IV). Me2CO-extracted cedar shavings soaked 1 hr. in H2O at 5°, the extract evaporated to 200 cc., diluted with 4 vols. MeOH, kept 24 hrs., and centrifuged, the precipitate dissolved in H2O containing a small amount of ClO2 and repptd. with 4 vols. MeOH, and the precipitate washed with MeOH, Me2CO, and Et2O and dried gave 0.014% H2O-extracted polysaccharide; a 10-mg. portion in 1 cc. 72% H2SO4 diluted at 25° with H2O to 25 cc., heated 12 hrs. on the water bath, cooled, **neutralized** with BaCO3, deionized with Amberlite IR-120, filtered, treated with Duolite A-4, shaken overnight, and filtered, the Duolite washed with H2O (the combined filtrates contained the **neutral** sugars), shaken 24 hrs. with N H2SO4, filtered, and washed **neutral** with H2O, and the combined filtrates **neutralized** with BaCO3, filtered, treated with Amberlite IR-120, and evaporated gave a sirup containing the uronic acids. The sirups from the cold H2O extract diluted with a small volume of H2O and chromatographed on paper showed the presence of **galactose** (V), II, mannose (VI), I, III, IV, and **glucuronic** acid (VII). Two parallel H2O extns. of cedar shavings at 20 and 50° gave addnl. trace amts. of 4-O-methyl-D-**glucuronic** acid (VIII). Cedar shavings extracted 0.5 hr. at 20° with 5% aqueous NaOH, filtered, acidified slightly with AcOH, kept 2 days at room temperature, and centrifuged, the precipitate suspended in H2O, dialyzed 7 days against running H2O, concentrated to 200 cc. in vacuo, treated with a slight excess ClO2 in small portions, and diluted with 4 vols. MeOH, and the precipitate washed with MeOH, Me2CO, and petr. ether and dried gave 0.13% H2O-insol. polysaccharide; the supernatant from the centrifugation dialyzed 9 days against running H2O, concentrated to 200 cc. in vacuo, and diluted with 4 vols. MeOH, the precipitate dissolved in 100 cc. H2O, bleached with ClO2, and repptd. with 4 vols. MeOH, and the product washed with MeOH, Me2CO, and petr. ether yielded 1.28% H2O-soluble polysaccharide. Qual. paper chromatographic analysis of the 5% NaOH exts. showed the presence of V, II, VI, I, III, IV, VIII, and 2-O-(4-O-methyl-D-**glucuronopyranosyl**)-D-xylose (IX). Cedar shavings (154 g.) extracted with Me2CO added to 3 l. 6% aqueous NaClO3 (adjusted to pH 4.7 with AcOH), and kept 12 hrs. at 50 ± 3°, the liquid drained and replaced with fresh aqueous NaClO3, the mixture kept 24 hrs. at 50 ± 3°, treated a 3rd time for 8 hrs. with fresh NaClO3, the shavings drained and covered several times with H2O, washed, soaked repeatedly during several days, filtered, dehydrated with MeOH, and dried at room temperature gave holocellulose containing α-cellulose 69.5, β-cellulose 1.4, γ-cellulose 29.1, ash 1.1, silica 0.03, I 1.0, II a large amount, VI 12.3, I trace, III 5.6, IV trace, VII trace, VIII 0.6, soluble lignin 3.6 g., and insol. lignin 0.1%; its intrinsic viscosity in M cupriethylenediamine hydroxide was 8.3 dl./g. Holocellulose (120 g.) slurried 20 min. with 0.1N NaOH and filtered, the residual pad washed with 0.1N NaOH to collect a total of 4 l. filtrate, the washed sample extracted similarly with 4% aqueous NaOH, and then again with 18% aqueous NaOH, each of the 3 filtrates filtered through a glass filter, acidified with AcOH, dialyzed 10 days against H2O, concentrated to 1/20 of the original volume in vacuo, diluted with 4 vols. H2O, kept overnight, and centrifuged, the ppts. dissolved in 100 cc. H2O, bleached with ClO2 at room temperature, repptd. with 4 vols. MeOH, and centrifuged, and the solid washed with MeOH, Me2CO, and Et2O and dried yielded 4.16, 6.32, and 6.99%, resp., hemicelluloses. The hemicellulose from the 0.1N NaOH extraction had [α]23D -1.76 (c 3.2, H2O), and an intrinsic viscosity of 0.38 in M cupriethylenediamine hydroxide; it contained ash 3.0, V 3.5, II 2.2, VI

21.5, I 1.0, III 16.2%, and traces of IV, VIII, IX, and galacturonic acid (X); the material from the 4% aqueous NaOH extract showed [α]23D -44.6° (c 2.3, H2O) 0.42 intrinsic viscosity, and contained ash 3.1, V 2.9, II 8.8, VI 22.4, I 1.0, III 24.1%, and VIII, and IX; the material from the 18.0% aqueous NaOH extract had [α]23D -37.2° (c 0.9, H2O), 0.44 intrinsic viscosity, and contained ash 1.6, V 1.0, II 18.3, VI 46.6, III 8.1%, and VIII, and IX. About 200 mg. 18.0% NaOH-extracted polysaccharide swollen overnight in 50 cc. H2O, made 0.2N in H2SO4, refluxed 2 hrs., cooled, and centrifuged, the residue hydrolyzed twice more in the same manner, the combined filtrate **neutralized** with BaCO3, filtered, treated with Amberlite IR-120, and evaporated, the residual sirup streaked on Whatman Number 3 paper and chromatographed, the area containing oligosaccharides cut from the paper, eluted, treated with Amberlite IR-120, and evaporated, and the residual sirup examined chromatographically gave spots for 4-O-β-D- **glucopyranosyl**-D-mannose, 4-O-β-D-mannopyranosyl-D-mannose, 4-O-β-D-mannopyranosyl-D-**glucose**, a trace 4-O-β-D- **glucopyranosyl**-D-**glucose**, and a mannotriose in addition to xylose oligosaccharides present as impurities. Residue (5.2 g.) from the 18.0% NaOH extraction wet with 25 cc. H2O, filtered after 3 days, washed with MeOH, treated with 150 cc. pyridine and with shaking with 3 40-cc. Ac2O portions at 1-hr. intervals, kept 22 hrs. at room temperature, heated 16 hrs. on the water bath, cooled, poured with stirring into 1% HCl, and filtered, and the residue washed with H2O, MeOH, and Et2O yielded 6.2 g. acetylated polysaccharide; a 5.1-g. portion shaken with 50 cc. Me2CO, treated with 190 cc. 30% NaOH and 60 cc. Me2SO4 in portions while adding occasionally small amts. Me2CO to control foaming, kept 2 hrs. at 55°, treated with 13 cc. Me2SO4 and 31 cc. 30% aqueous NaOH, heated 0.5 hr. on the water bath, cooled, acidified slightly with 5N H2SO4, dialyzed 3 days against H2O, and evaporated, the residual solution subjected to 2 addnl. methylations at 55° with 211 cc. 30% aqueous NaOH and 73 cc. Me2SO4, together with Me2CO as needed, dialyzed, concentrated, and extracted with CHCl3, the extract evaporated, the partially methylated sirup dissolved in 25 cc. Me2CO and 25 cc. MeI with 5 g. Ag2O and 3 g. CaSO4, refluxed 8 hrs., diluted with CHCl3, and centrifuged, the residue extracted with CHCl3, the combined CHCl3 solns. evaporated, and the sirupy residue remethylated in the same manner 6 more times without the addition of Me2CO, dissolved in CHCl3, and a sample repptd. by pouring into excess petr. ether gave an almost white, powdery methylated hemicellulose containing 45.0% MeO; the sirupy product dissolved in 60 cc. CHCl3, the solution diluted with 60 cc. Et2O, and the material fractionally repptd. with petr. ether gave the following fractions [total volume petr. ether added in cc., weight in g., % OMe, and [α]23D (c 1.0, CHCl3) given]: (1) 300, 0.19, 40.4, -25.9°; (2) 400, 0.55 (oil), 43.3, -; (3) 800, 0.95, 44.7, -18.6°; (4) - (mother liquor evaporated), 0.40 (oil), 44.8, -. Fraction (2) dissolved in 60 cc. CHCl3 and 60 cc. Et2O and diluted with 460 cc. petr. ether precipitated 0.21 g. material (fraction 2a), [α]23D -20.3° (c 1.0%, CHCl3), containing 43.7% MeO; the mother liquor evaporated gave 0.27 g. material (fraction 2b), [α]23D -20.3° (c 1.0, CHCl3), containing 44.1% MeO. Fraction (4) dissolved in 10 cc. CHCl3 and diluted with 600 cc. petr. ether gave 0.20 g. material (fraction 4a), [α]23D -17.6° (c 1.0, CHCl3). containing 44.8% MeO; the mother liquor evaporated yielded 0.20 g. material (fraction 4b). Fraction (2a), (2b), (3), and (4a) were combined and designated polysaccharide A (XI). XI dissolved in 50 cc. MeOH containing 2% HCl. refluxed 12 hrs., and evaporated, the sirupy residue dissolved in 100 cc. N H2SO4, the solution refluxed 13 hrs. on the water bath, **neutralized** with BaCO3, filtered, deionized with Amberlite IR-120 and Duolite A-4, and evaporated, and the sirupy residue separated by chromatography on Whatman 3MM paper gave 394 mg.

sirupy 2,3,6-tri-O-methyl-D-mannose (XII), [α]22D -12.3° (c 3.9, H2O), 102 mg. 2,3,6-tri-O-methyl-D-**glucose**, m. 121-2° (Et2O-petr. ether), [α]22D 67.9° (c 0.9 H2O containing a trace NH4OH), 56 mg. sirupy 2,3,4,6-tetra-O-methyl-D-**glucose** (XIII), 16 mg. sirupy 2,3,4.6-tetra-O-**methylgalactose** (XIV), and 4 mg. sirupy di-O-**methylgalactose** (XV). XII (100 mg.) in 5 cc. H2O treated with 0.25 cc. Br, kept 7 days in the dark, worked up in the usual manner, the resulting γ-lactone dissolved in 4 cc. MeOH, and the solution refluxed 40 min. with 0.05 cc. PhNHNH2 gave the phenylhydrazide derivative, m. 142-3° (absolute EtOH), [α]22D -16.0° (c 1.0, H2O). XIII (88 mg.), [α]22D 53.5° (c 0.9, H2O), was identified by preparation of N-phenyl-D-**glucopyranosylamine** 2,3,4,6-tetramethyl ether, m. 135-6° (Et2O-petr. ether). XIV (16 mg.) treated in the usual manner with PhNH2 gave 2,3,4,6-tetra-O-**methylgalactose** N-**phenylglucosamine**, m. 189-90° (Et2O-petr. ether). XV (4 mg.) heated 20 min. in a sealed tube with 1 cc. 48% HBr at 100° and the mixture chromatographed showed the presence of V. The methylation and graded hydrolysis results, in conjunction with certain phys. and chemical properties, indicate that the **glucomannan** from western red cedar is a short, predominantly straight **chain** polymer composed of II and VI in a ratio of 1:2.5 and joined mainly by 1 →4-β-glycosidic bonds. It is similar to **glucomannans** isolated from other woods.

IT Paper pulp or Wood pulp
(bark removal for manufacture of)

IT **Glucomannans**
(from cedar (Western red))

IT Thuja plicata
(**glucomannan** and hemicelluloses of)

IT **Polysaccharides**
(of cedar (Western red) hemicelluloses)

IT Xylose, 2-O-(4-O-methyl-D-**glucopyranuronosyl**)-, D-
(from cedar (Western red) hemicellulose)

IT 15761-61-2, Mannose, 4-O-β-D- **glucopyranosyl**-, D-
(cedar (Western red) hemicellulose)

IT 9034-32-6, Hemicellulose
(from cedar (Western red))

IT 3615-47-2, D-**Glucose**, 2,3,4,6-tetra-O-methyl- 4060-05-3, **Galactose**, 2,3,4,6-tetra-O-methyl-, D- 4234-44-0, D-**Glucose**, 2,3,6-tri-O-methyl- 5856-21-3, Mannose, 2,3,6-tri-O-methyl-, D- 14417-51-7, Mannose, 4-O-β-D-mannopyranosyl-, D- 28072-80-2, D-**Glucose**, 4-O-β-D-mannopyranosyl-29470-23-3, **Galactose**, di-O-methyl-, D-
(from cedar (Western red) hemicellulose)

IT 528-50-7, Cellobiose
(from cedar (western red) hemicellulose)

IT 50-99-7, D-**Glucose**
(from hemicellulose of Western red cedar)

IT 147-81-9, **Arabinose**
(in cedar (Western red) hemicellulose)

IT 58-86-6, Xylose 59-23-4, **Galactose** 3615-41-6, **Rhamnose**
(in cedar (Western red) hemicelluloses)

IT **6556-12-3**, **Glucuronic** acid
(of hemicellulose, of Western red cedar)

L91 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2005 ACS on STN
AN **1953:31777** HCAPLUS
DN **47:31777**
OREF 47:5361g-i,5362a-b
ED Entered STN: 22 Apr 2001
TI The polysaccharide components of certain freshwater algae

AU Hough, L.; Jones, J. K. N.; Wadman, W. H.
CS Univ. Bristol, UK
SO Journal of the Chemical Society, Abstracts (1952) 3393-9
CODEN: JCSAAZ; ISSN: 0590-9791
DT Journal
LA Unavailable
CC 10 (Organic Chemistry)
AB The fresh-water algae Nitella (I), Oscillatoria (II), and Nostoc (III) have been studied because they have been suggested as foods. I, washed with EtOH to remove fats and chlorophyll, gives no more than a trace of carbohydrates with MeOH, hot H2O, or cold or hot dilute alkali; 184 g. I treated with 25% NaOH (3 hrs. at 100°) gives 47 g. crude cellulose (IV), which gives **glucose** on hydrolysis with N H2SO4 (2 hrs. at 100°); 20 g. IV, methylated 6 times with Me2SO4 and NaOH, gives 17.1 g. Me derivative (44.4% MeO) with [α]D - 14.9° (CHCl3, c 2.3); hydrolysis with 3% HCl in 1:1 AcOH-MeOH gives 93% 2,3,6-trimethyl-D-**glucose**; IV has a **chain** length of over 100 **glucose** units. II gives on extraction with hot NaOH a material which yields **glucose** and a little xylose and **rhamnose** on hydrolysis. II, extracted with 2 N NaOH at 18° and then with 2 N NaOH at 100° (1 hr.), the filtrate **neutralized** with AcOH, treated with Cu(OAc)2, filtered, the filtrate concentrated to about 200 cc., poured into 3 l. EtOH, the precipitate shaken in 400 cc. H2O with Amberlite resins, and the filtrate again precipitated with EtOH, gives a **polyglucosan** (V) with [α]D 188°; hydrolysis gives only **glucose**; the methylated product (42.7% MeO) has [α]D 195° (CHCl3, c 3.6), and on hydrolysis yields 2,3,4,6-tetramethyl- and 2,3,6-trimethyl-D-**glucose**, the quantity of which indicates a **chain** length of 23-6 **glucose** units. V is of the amylopectin type. III on extraction with hot H2O affords a mucilaginous complex polysaccharide, 200 mg. of which treated in 20 cc. H2O with 30 cc. 1% EtOH-HCl, then with 30 cc. ether (the precipitation repeated 5 times), and then 6 times with the omission of the HCl, gives 43 mg. of the mucilage, [α]D 11.8° (H2O, c 1), equivalent by alkaline titration 595; hydrolysis gives (roughly) 30% hexuronic acids, 10% **rhamnose**, 25% D-xylose, and 35% of a remainder composed largely of **galactose** with smaller quantities of **glucose** and an unknown sugar; details of the separation and identification of these compds. are given.
IT **Hexuronic acids**
(from algae)
IT **Polysaccharides**
(of algae)
IT Algae
Nitella
Nostoc
Oscillatoria
Seaweeds
(polysaccharides from)
IT 50-99-7, D-**Glucose** 58-86-6, Xylose 59-23-4, **Galactose** 3615-41-6, **Rhamnose** 9004-34-6, Cellulose 9012-72-0, **Glucosan**
(from algae)

=> => d his

(FILE 'HOME' ENTERED AT 07:35:46 ON 18 JAN 2005)
SET COST OFF

FILE 'WPIX' ENTERED AT 07:35:54 ON 18 JAN 2005
E A61K031-715/IC,ICM,ICS
L1 3067 S E3-E5

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L2          140 S A61K031-715/IPC NOT L1
                E C08B037/IC,ICM,ICS
L3         7934 S E3-E5
L4          287 S C08B037/IPC NOT L3
                E A61K031-70/IC,ICM,ICS
L5        13878 S E3-E5
L6          585 S A61K031-70/IPC NOT L5
                E C07H001/IC,ICM,ICS
L7         1540 S E29-E31,E34-E36
L8         1897 S E5-E8 NOT L7
L9          105 S C07H001/IPC NOT L7,L8
L10       20239 S (B04-C02 OR B04-C02X OR C04-C02 OR C04-C02X)/MC
L11       14194 S (B04-C03D OR C04-C03D)/MC
L12       58523 S G3623/PLE
                E POLYSACCHARIDE/PLE
                E E6+ALL
                E POLYSACCHARIDE/PLE
                E E4+ALL
L13        3583 S E5
L14       25069 S (POLYSACCHARIDE OR POLY SACCHARIDE OR OLIGOSACCHARIDE OR OLIG
L15      121324 S L1-L14
L16          21 S ((GALACTOURONIC OR GALACTO? URONIC)()ACID OR GALACTOURONATE O
L17          21 S ((GALACTOURONIC OR GALACTO? URONIC)()ACID)/BIX
L18         127 S (GALACTOSE AND URONIC ACID)/BIX
L19      121361 S L15-L18
L20       48623 S L19 AND (PY<=1993 OR PRY<=1993 OR AY<=1993)
L21        7645 S (F123(S)J014(S)F199)/M0,M1,M2,M3,M4,M5,M6
L22        4215 S L21 AND (PY<=1993 OR PRY<=1993 OR AY<=1993)
L23         351 S L21 (S)M423/M0,M1,M2,M3,M4,M5,M6 AND L22
L24          81 S L16-L18 AND L20
L25         894 S L10,L11 AND (B10-C02 OR C10-C02)/MC
L26        2181 S L12 (S)F35/PLE AND L20
L28        1501 S (G3623(L)F35(L)B5094)/PLE
L29        1924 S (G3623(L)F35(L)B4977)/PLE
L30        4753 S (G3623(L)F35(L)B4740)/PLE
L31         865 S L28-L30 AND L20
L32        1603 S ((R24069 OR R24037)(L)F35)/PLE
L33         334 S L32 AND (PY<=1993 OR PRY<=1993 OR AY<=1993)
L34          62 S L1 AND L23,L24,L25,L31,L33
L35           2 S L2 AND L23,L24,L25,L31,L33 NOT L34
L36         113 S L3 AND L23,L24,L25,L31,L33 NOT L34,L35
L37           5 S L4 AND L23,L24,L25,L31,L33 NOT L34,L35,L36
L38          74 S L5 AND L23,L24,L25,L31,L33 NOT L34,L35,L36,L37
L39           2 S L6 AND L23,L24,L25,L31,L33 NOT L34,L35,L36,L37,L38
L40           0 S L7 AND L23,L24,L25,L31,L33 NOT L34,L35,L36,L37,L38,L39
L41           8 S L8 AND L23,L24,L25,L31,L33 NOT L34,L35,L36,L37,L38,L39
                SEL DN AN L34 11 36 40 45 60
L42           5 S E1-E10
                SEL DN AN L37 5
L43           1 S E11-E12
                SEL DN AN L38 40 41
L44           2 S E13-E16
L45           8 S L42-L44
                SEL DN AN L36 41 61 68 71 78 91 104 113
L46           8 S E17-E31
L47          16 S L45,L46
                E PLATT D/AU
L48          49 S E3-E11
L49           9 S L48 AND L19
L50          40 S L48 NOT L49
L51          24 S L47,L49 AND L1-L50
L52       51802 S L20,L22,L33
L53           6 S L52 AND L16,L17
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L54         205 S L52 AND URONIC ACID/BIX
L55         210 S L52 AND URONIC/BIX
L56         210 S L54,L55
L57          90 S L56 AND (RHAMNOSE OR GLUCOSE OR ARABINOSE OR GALACTOSE)/BIX
L58          14 S L51 AND L53,L57
L59          13 S L51 AND L56
L60          24 S L51,L58,L59
L61           5 S L53 NOT L60
                SEL DN AN L61 4 5
L62           2 S L61 AND E1-E2
L63          26 S L60,L62
L64          77 S L57 NOT L63
                SEL DN AN 4 19 46 47 53 65 70 76 77
L65           9 S E3-E16 AND L64
L66          35 S L63,L65 AND L1-L65
L67          28 S L66 AND (URONIC OR ?URONIC)/BIX
L68           7 S L66 NOT L67
L69           6 S L68 AND PLATT ?/AU
L70          34 S L67,L69
L71          32 S L70 AND (?RHAMNO? OR ?GLUCO? OR ?GLUCU? OR ?ARABINO? OR ?GALA
L72          34 S L70,L71

     FILE 'WPIX' ENTERED AT 09:25:07 ON 18 JAN 2005

     FILE 'HCAPLUS' ENTERED AT 09:26:01 ON 18 JAN 2005
                E POLYSACCHARIDE/CT
L73       49734 S E12
L74       39843 S E50-E61
L75       49734 S L73,L74
                E URONIC ACID/CT
L76        3936 S E4-E17
                E E4+ALL
L77        1876 S E7
L78        3931 S E3,E4
L79        4122 S E8
L80         969 S E11-E14
L81         886 S L75 AND L76-L80 AND (PY<=1993 OR PRY<=1993 OR AY<=1993)
L82         163 S L81 AND NEUTRAL?
L83          15 S L82 AND CHAIN
L84         661 S L81 AND (?RHAMNO? OR ?GLUCO? OR ?GLUCU? OR ?GALACTO? OR ?ARAB
L85         131 S L84 AND L82
L86          12 S L85 AND L83
                SEL DN AN 3 5 6 7 9 10 11 12
L87           8 S E1-E24
L88           3 S L83 NOT L86
                SEL DN AN 1
L89           1 S L88 AND E25-E27
L90           9 S L87,L89

     FILE 'HCAPLUS' ENTERED AT 09:33:02 ON 18 JAN 2005
L91           9 S L90 AND L73-L90

     FILE 'REGISTRY' ENTERED AT 09:34:16 ON 18 JAN 2005
                E GALACTURONIC ACID/CN
L92           2 S E3
L93           1 S E6
L94           3 S L92,L93
                E C6H10O7/MF
L95          36 S E3 AND OC5/ES
L96          29 S L95 AND URONIC
L97           5 S L96 AND GALACTO?
                SEL RN
L98          45 S E1-E5/CRN
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L99          25 S L98 AND PMS/CI
L100         20 S L98 NOT L99
                E C6H10O07/MF
                E C6H10O7/MF
L101        125 S E3 NOT L95
L102         12 S L101 AND NR>=1
L103        113 S L101 NOT L102
L104         28 S L103 AND URONIC
L105          6 S L104 AND GALACT?
L106          3 S L105 NOT (LABELED OR 14C OR ARABIN?)
                SEL RN
L107        115 S E1-E3/CRN
L108         64 S L107 AND PMS/CI
L109          1 S L108 AND (GLUCO? OR RHAMN? OR ARABINO?)
L110         21 S L108 AND NR>=1
L111         43 S L108 NOT L110

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